Pioneer *sound.vision.soul*

Service Manual

PDP-R04U

ORDER NO.
ARP3178

MEDIA RECEIVER

PDP-R04U
PRO-R04U

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PDP-R04U	TUCK	AC120-240V	
PRO-R04U	KUC	AC120V	

Please connect it to the PLASMA DISPLAY PDP-504PU, PDP-434PU, PRO-504PU or PRO-434PU, for adjustment and operation inspection.

For details, refer to "Important symbols for good services".

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

T-ZZK DEC. 2003 printed in Japan

SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

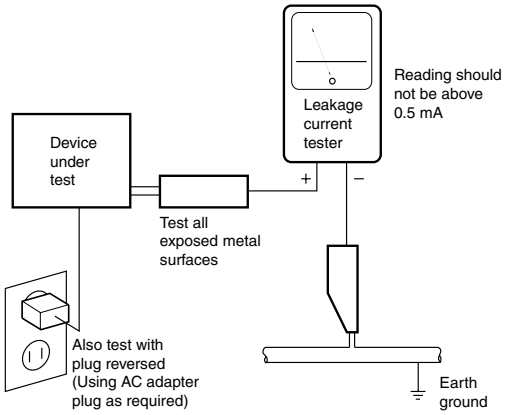
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

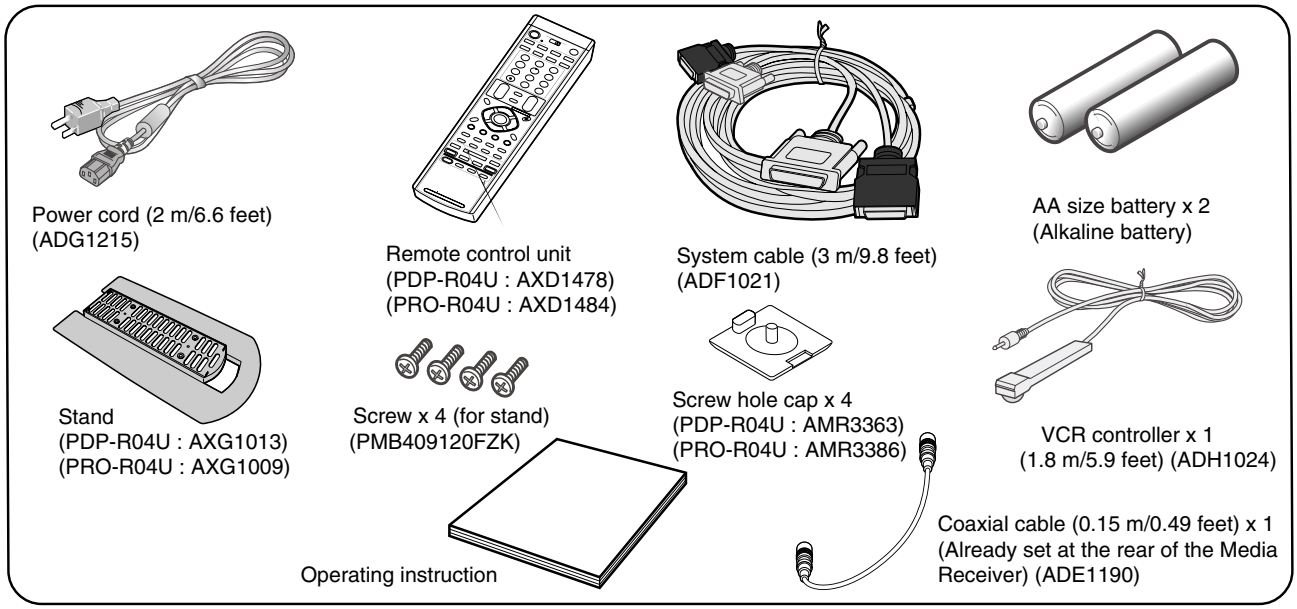
Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

CONTENTS

1. SPECIFICATIONS

Item			Media Receiver, Model: PDP-R04U, PRO-R04U
Reception System (Digital)			ATSC Digital TV system
	Circuit type		8VSB demodulation
	Tuner	VHF/UHF	VHF 2–13ch, UHF 14–69ch
		CATV	2–125ch (Standard Channel Plan, 8VSB only)
	Audio format		Dolby Digital
Reception System (Analog)			American TV standard NTSC system
	Circuit type		Video signal detection PLL full synchronous detection, PLL digital synthesizer system
	Tuner	VHF/UHF	VHF 2–13ch, UHF 14–69ch
		CATV	1–125ch
	Audio multiplex		BTSC system
Terminals	Rear	DTV Antenna	75Ω UNBAL, F Type for DTV in
		Antenna A	75 Ω UNBAL, F Type for VHF/UHF/CATV in Loop out
		Antenna B	75 Ω UNBAL, F Type for VHF/UHF/CATV in Loop out
		i.LINK (TS)	S400 (2)
		INPUT 1	COMPONENT VIDEO in, S-VIDEO in, VIDEO in, AUDIO in, HDMI in
		INPUT 2	S-VIDEO in, VIDEO in, AUDIO in
		INPUT 3	COMPONENT VIDEO in, AUDIO in, HDMI in
		Monitor Out	S-VIDEO out, VIDEO out, AUDIO out
		Digital Audio Output	Optical (1)
		VCR Control Output	1
		CONTROL IN	1
		CONTROL OUT	1
	Front	INPUT 4	COMPONENT VIDEO in, S-VIDEO in, VIDEO in, AUDIO in,
		PC	Analog RGB in, AUDIO in
OSD			English/French/Spanish/Korean(PDP-R04U)
Power Requirement			110–240 V AC, 50/60 Hz, 44.5 W (0.3 W Standby, 120 V) (PDP-R04U)
Dimensions			420 (W) × 90 (H) × 297 (D) mm (16 $^{9}/_{16}$ (W) × 3 $^{9}/_{16}$ (H) × 11 $^{11}/_{16}$ (D) inches)
Weight			5.7 kg (12.6 lbs.)

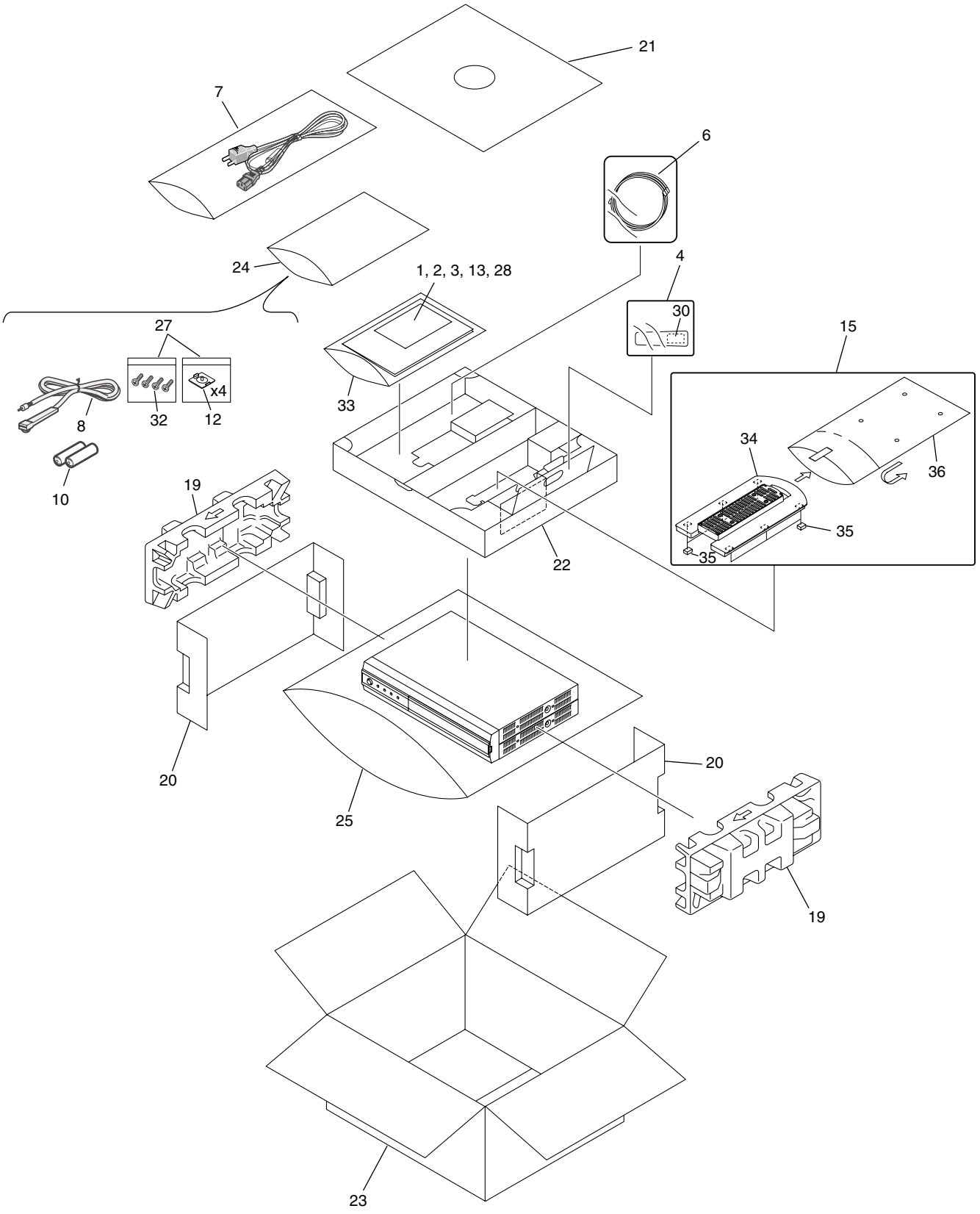
• Design and specifications are subject to change without notice.



2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 PACKING



PACKING parts List

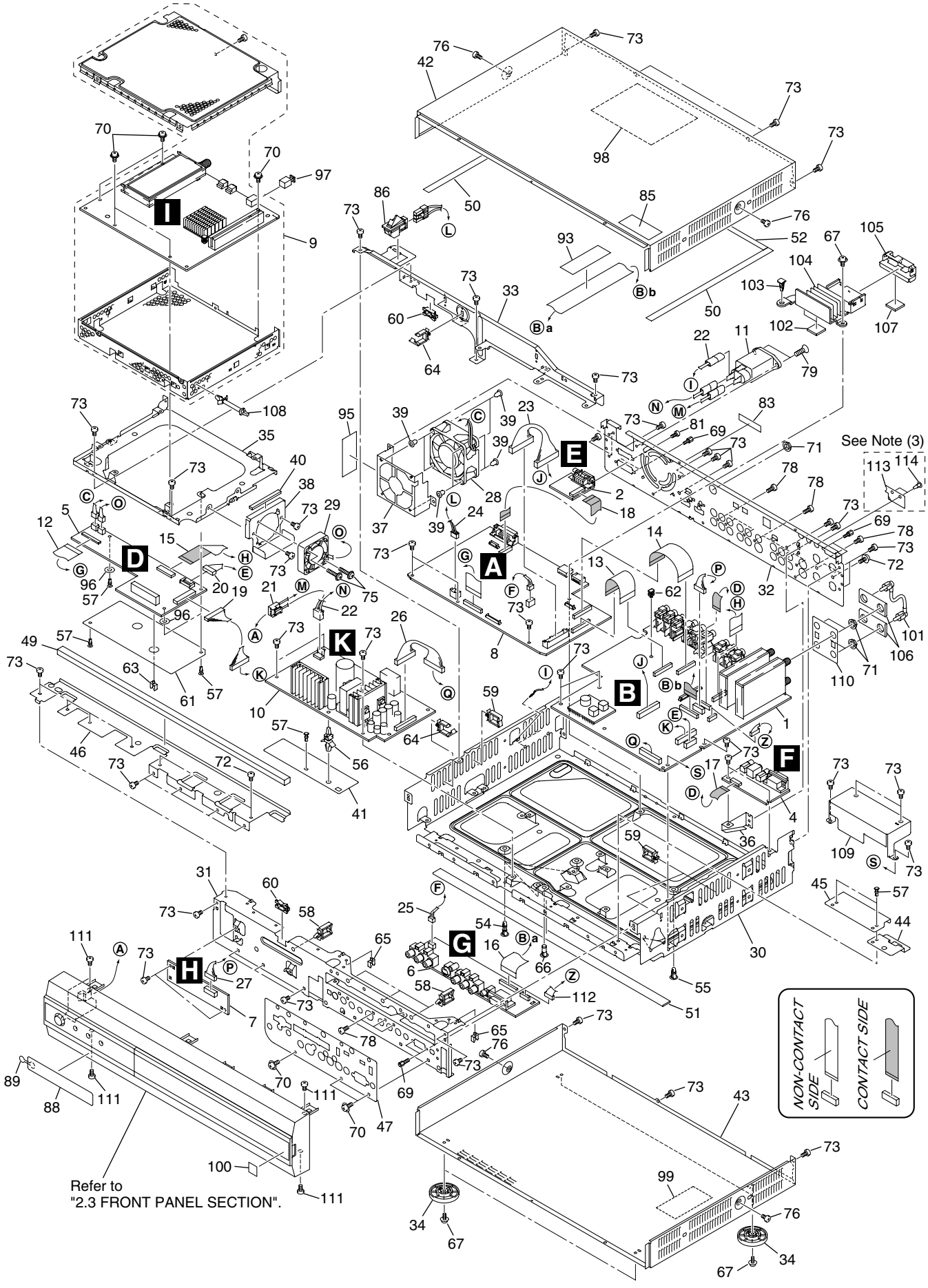
Mark	No.	Description	Part No.
	1	Operating Instruction (English/French/Spanish)	See Contrast table(2)
	2	Operating Instruction(English)	See Contrast table(2)
	3	Operating Instruction(English)	ARB1559
	4	Remote Contorol Unit	See Contrast table(2)
	5	••••••	
	6	System cable (3m)	ADF1021
⚠	7	Power Cord	ADG1215
	8	VCR Controller (1.8m)	ADH1024
	9	••••••	
NSP	10	AA size Battery (LR6)	VEM1021
	11	••••••	
	12	Screw Hole Cap	See Contrast table(2)
	13	Operating Instruction HDMI (English/French/Spanish)	ARE1373
	14	••••••	
	15	Stand Assy	See Contrast table(2)
	16	••••••	
	17	••••••	
	18	••••••	
	19	Protector	AHA2305
	20	Cardboard Spacer	AHB1246
	21	Top Pad (Cardboard)	AHB1247
	22	Accessory Box	AHC1051
	23	Curton	See Contrast table(2)
NSP	24	Literature Bag	AHG1303
	25	Laminated Sheet Bag	AHG1332
	26	••••••	
	27	Vinyl Bag	AHG1337
NSP	28	Card	VRY1132
	29	••••••	
	30	Battery Cover	AZA7424
	31	••••••	
	32	Screw	PMB40P120FZK
	33	Vinyl Bag	AHG1340
NSP	34	Stand	See Contrast table(2)
NSP	35	Stand Cushion	AEB1390
	36	Laminated Sheet Bag	AHG1334

(2) CONTRAST TABLE

PRO-R04U/KUC and PDP-R04U/TUCK are constructed the same except for the following:

Mark	NO	Symbol and Description	PDP-R04U/TUCK	PRO-R04U/KUC
	1	Operating Instruction (English/French/Spanish)	ARE1367	Not used
	2	Operating Instruction(English)	Not used	ARB1556
	4	Remote Contorol Unit	AXD1478	AXD1484
	12	Screw Hole Cap	AMR3363	AMR3386
	15	Stand Assy	AXG1013	AXG1009
	23	Curton	AHD3170	AHD3192
NSP	34	Stand	AMR3352	AMR3382

2.2 EXTERIOR SECTION



EXTERIOR SECTION parts List

Mark	No.	Description	Part No.
	1	AV BOARD Assy	See Contrast table(2)
	2	MDR Assy	AWZ6778
	3	••••••	
	4	SR Assy	AWZ6780
	5	BRIDGE Assy	AWZ6803
	6	FRONT Assy	See Contrast table(2)
	7	LED Assy	AWZ6805
	8	MR MAINBOARD ASSY	AWV2028
	9	DTV TUNER BOARD	AXY1064
⚠	10	POWER SUPPLY UNIT	AXY1065
⚠	11	AC Inlet (CN1)	AKP1249
	12	Flexible Cable (J201)	ADD1209
	13	Flexible Cable (J202)	ADD1209
	14	Flexible Cable (J203)	ADD1210
	15	Flexible Cable (J204)	ADD1211
	16	Flexible Cable (J205)	ADD1244
	17	Flexible Cable (J206)	ADD1213
	18	Flexible Cable (J207)	ADD1214
	19	12p Housing Wire (J109)	ADX2849
	20	8p Housing Wire (J110)	ADX2850
	21	Wire Harness (J103)	ADX2831
	22	Earth Wire (J104)	ADX2832
	23	15p Housing Wire (J105)	ADX2833
	24	3p Housing Wire (J107)	ADX2836
	25	3p Housing Wire (J108)	ADX2837
	26	16p Housing Wire (J112)	ADX2859
	27	7p Housing Wire (J113)	ADX2860
	28	Fan Motor 60*25l	AXM1041
	29	Fan Motor 40*10.5l	AXM1042
	30	Base Chassis	See Contrast table(2)
	31	Front Chassis	See Contrast table(2)
	32	Terminal Panel	See Contrast table(2)
	33	Center Stay	ANG2564
	34	Leg Assy	AXG1012
	35	BS Holder	ANG2566
	36	SR Holder	ANG2567
	37	Fan Holder	ANG2568
	38	Fan Holder 40	ANG2600
	39	Insulation Rubber	AEB1377
	40	Fan Cushion	AEB1388
	41	Barrier A	AEC1936
	42	Metal Bonnet Top	See Contrast table(2)
	43	Metal Bonnet Bottom	See Contrast table(2)
	44	Barrier C	AEC1962
	45	Barrier D	AEC1965
	46	Front Shield A	ANG2615
	47	Front Shield C	ANG2637
	48	••••••	
	49	Gasket A	ANK1717
	50	Gasket B	ANK1718

Mark	No.	Description	Part No.
	51	Gasket C	ANK1719
	52	Gasket D	ANK1720
	53	Nylon Binder	AEC-093
	54	PCB Holder	AEC1097
	55	Spacer	AEC1256
	56	Locking Card Spacer	AEC1429
	57	Nyron Rivet	AEC1671
	58	Wire Saddle	AEC1745
	59	Reuse Wire Saddle	AEC1945
	60	Edge Saddle	AEC1946
	61	Barrier B	AEC1956
	62	Mini Card Spacer	AEC1959
	63	Mini Clump	AEC1961
	64	Reuse Clamp	AEC1963
	65	Mini Cramp	AEC1971
	66	Card Space A	BEC1120
	67	Screw	ABZ30P080FZK
	68	••••••	
	69	Hexagon Headed Screw	BBA1051
	70	Screw	BBB30P080FMC
	71	Washer Faced Nut	BBN1005
	72	••••••	
	73	Screw	BBZ30P060FZK
	74	••••••	
	75	Screw	BBZ30P140FMC
	76	Screw	See Contrast table(2)
	77	••••••	
	78	Screw	BPZ30P100FZK
	79	Screw	CBZ30P080FZK
	80	••••••	
	81	Screw	PMZ26P060FZK
	82	••••••	
NSP	83	Serial Label	ARW1100
	84	••••••	
	85	Caution Label	AAX2999
	86	Trap Switch	ASG1089
	87	••••••	
	88	Power SW Caution	AAX3040
NSP	89	TAB Film	AEC1976
	90	••••••	
	91	••••••	
	92	••••••	
	93	FFC Cushion	AEB1395
	94	••••••	
	95	DVI Cushion	AEB1396
	96	Fiber Washer	WA32W100E025
	97	OPT Connector Top	AKT1096
	98	Solder Warning Label	AAX2644
NSP	99	Label	See Contrast table(2)
	100	Energy Star Label	See Contrast table(2)

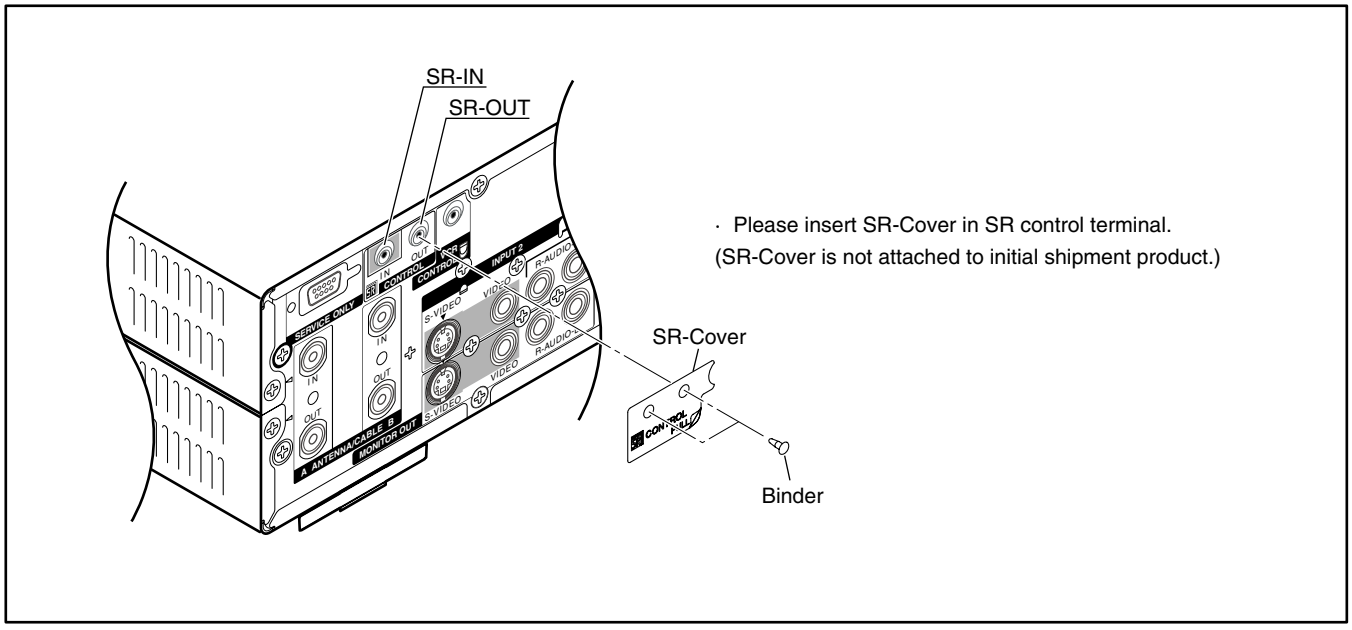
Mark	No.	Description	Part No.
	101	Pulg Cord (0.15m)	ADE1190
	102	Silicon Sheet HDMI	AEB1379
	103	Surkit Boad Spaser	AEC1964
	104	Heat Sink HDMI	ANH1618
	105	HDMI Shield	ANG2646
	106	Gasket G	ANK1724
	107	Gasket F	ANK1722
	108	PCB Spacer	AEC1104
	109	DDCON Shield	ANG2648
	110	FE Shield S	ANG2647
	111	Screw	ABZ30P060FMC
	112	6p Housing Wire (J114)	ADX2881
	113	SR -Cover	AAX3066
NSP	114	Binder	AEC-036

(2) CONTRAST TABLE

PRO-R04U/KUC and PDP-R04U/TUCK are constructed the same except for the following:

Mark	NO	Symbol and Description	PDP-R04U/TUCK	PRO-R04U/KUC
	1	AV BOARD Assy	AWZ6802	AWZ6819
	6	FRONT Assy	AWZ6804	AWZ6820
	30	Base Chassis	ANA1771	ANA1772
	31	Front Chassis	ANB1862	ANB1865
	32	Terminal Panel	ANC2352	ANC2355
	42	Metal Bonnet Top	ANE1615	ANE1621
	43	Metal Bonnet Bottom	ANE1616	ANE1622
	76	Screw	BMZ30P060FNI	BMZ30P060FZK
NSP	99	Label	AAX2974	AAX3012
	100	Energy Star Label	AAX3030	Not used

(3) NOTE



A

B

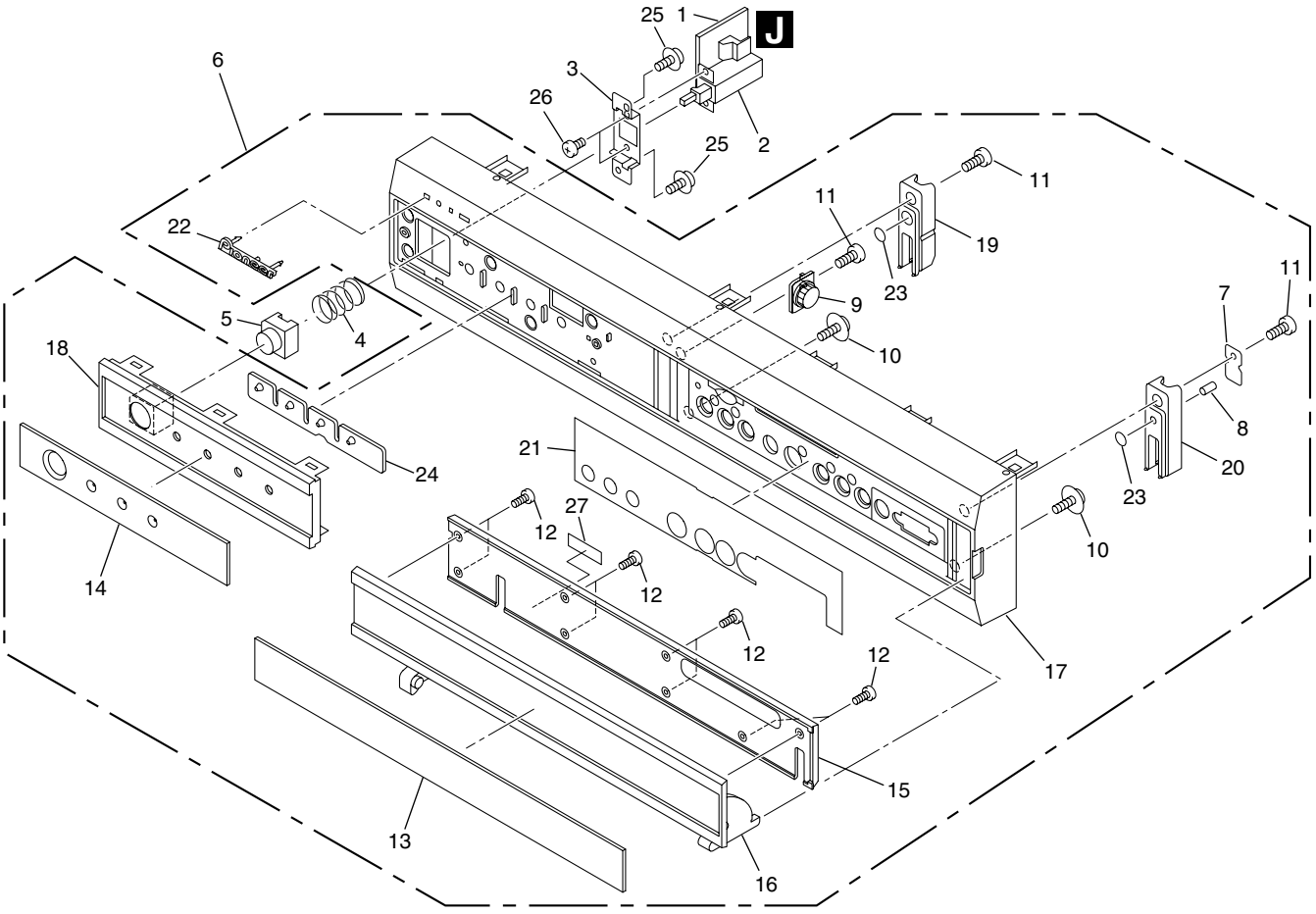
C

D

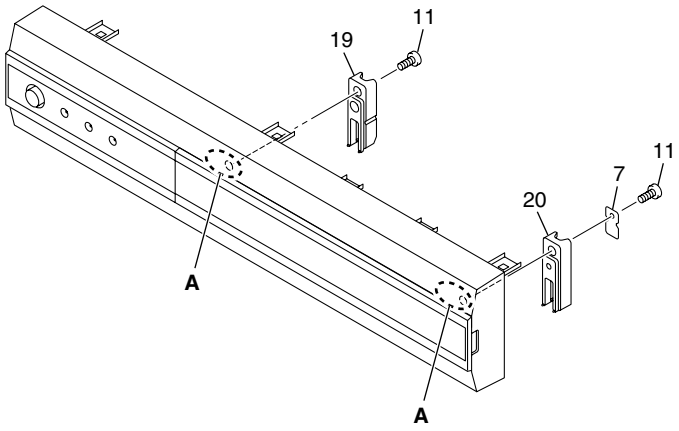
E

F

2.3 FRONT SECTION



● NOTES ON ASSEMBLING (for the PRO-R04U only)



- The screws (11) are fixed to the parts (19) and (7) with screw-fixing adhesive.
- If the screws (11) are loosened for servicing, reattach the screws after servicing as follows:
  1. Tighten the screws (11) with normal torque until the parts indicated by **A** show slight indentation.
  2. Loosen the screws (11) by one-eighth of a turn until the indentation of the parts indicated by **A** return to normal.
  3. Check that the parts (19) and (20) are securely attached.
  4. Apply one or two drops of screw-fixing adhesive between (11) and (19) and between (11) and (7).

FRONT SECTION parts List

Mark	No.	Description	Part No.
	1	AC SW ASSY	AWZ6783
⚠	2	POWER SWITCH (S9341)	ASG1093
	3	SW Holder	ANG2565
	4	SW Spring	ABH1109
	5	Power Button	AAD4124
	6	Front Panel Assy	See Contrast table(2)
	7	Magnet Holder	ANG2579
	8	Magnet	AMF1003
	9	Dumper	AXA1017
	10	Special Screw 3x8	ABA1309
	11	Screw	BPZ30P080FZK
	12	Screw	See Contrast table(2)
	13	Panel A	See Contrast table(2)
	14	Panel B	See Contrast table(2)
	15	Door Inner Cover	See Contrast table(2)
	16	Door	See Contrast table(2)
	17	Front Panel A	See Contrast table(2)
	18	Front Panel B	See Contrast table(2)
	19	Door Cap L	See Contrast table(2)
	20	Door Cap R	See Contrast table(2)
	21	Sealing Sheet	See Contrast table(2)
	22	Pioneer Badge	See Contrast table(2)
	23	Door Cushion	See Contrast table(2)
	24	Lens For LED	AMR3353
	25	Screw	APZ30P080FMC
	26	Screw	BMZ30P060FMC
	27	Serial Sheet	AAX2609

(2) CONTRAST TABLE

PRO-R04U/KUC and PDP-R04U/TUCK are constructed the same except for the following:

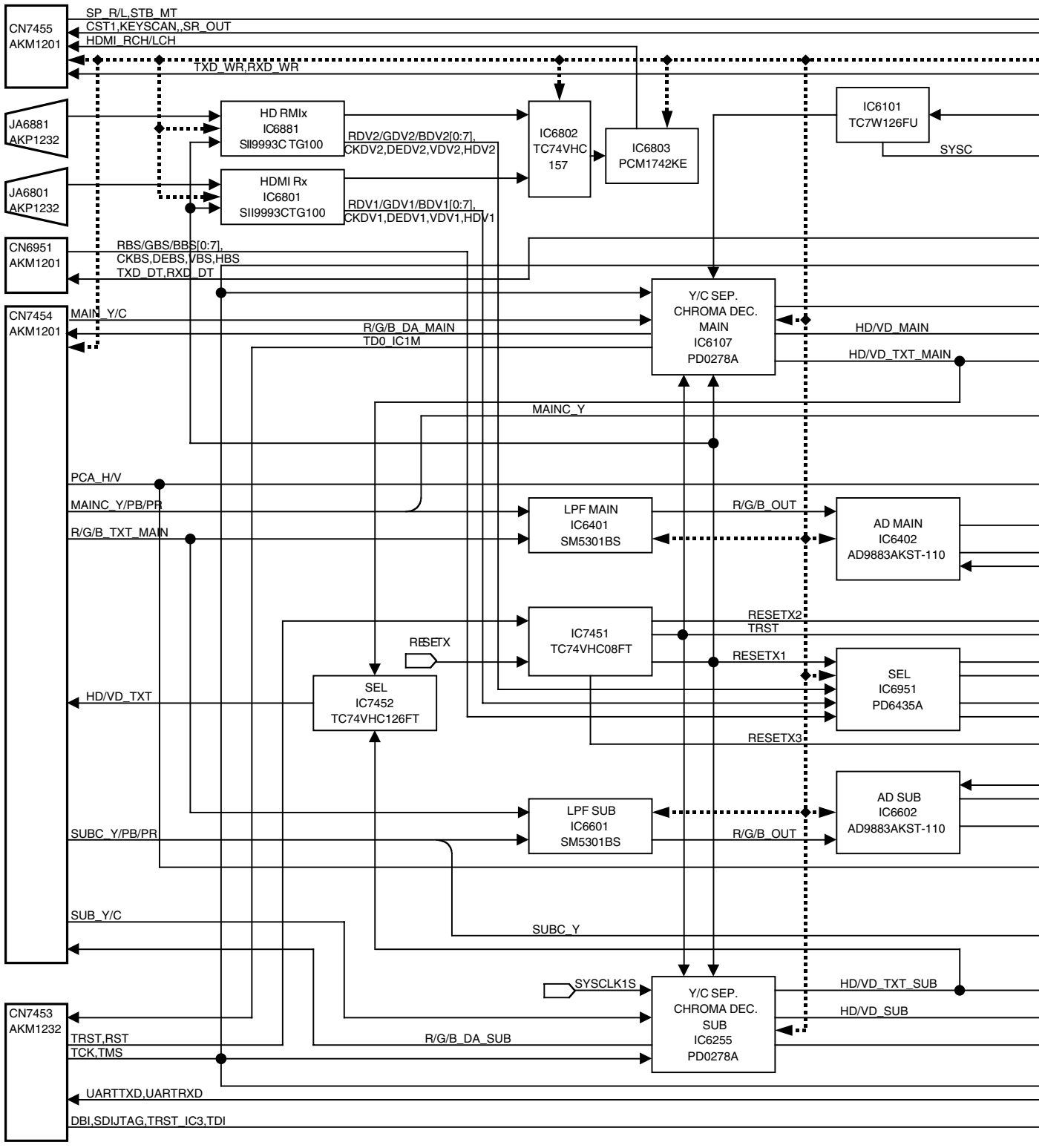
Mark	NO	Symbol and Description	PDP-R04U/TUCK	PRO-R04U/KUC
	6	Front Panel Assy	AXG1002	AXG1016
	12	Screw	JPZ20P035FNI	JPZ20P035FZK
	13	Panel A	AAK2803	AAK2809
	14	Panel B	AAK2804	AAK2811
	15	Door Inner Cover	AAK2807	AAK2810
	16	Door	AAN1469	AAN1470
	17	Front Panel A	AMB2771	AMB2774
	18	Front Panel B	AMB2767	AMB2775
	19	Door Cap L	AMR3360	AMR3367
	20	Door Cap R	AMR3361	AMR3368
	21	Sealing Sheet	AAL2448	AAL2458
	22	Pioneer Badge	VAM1124	PAN1376
	23	Door Cushion	AEB1391	AEB1394

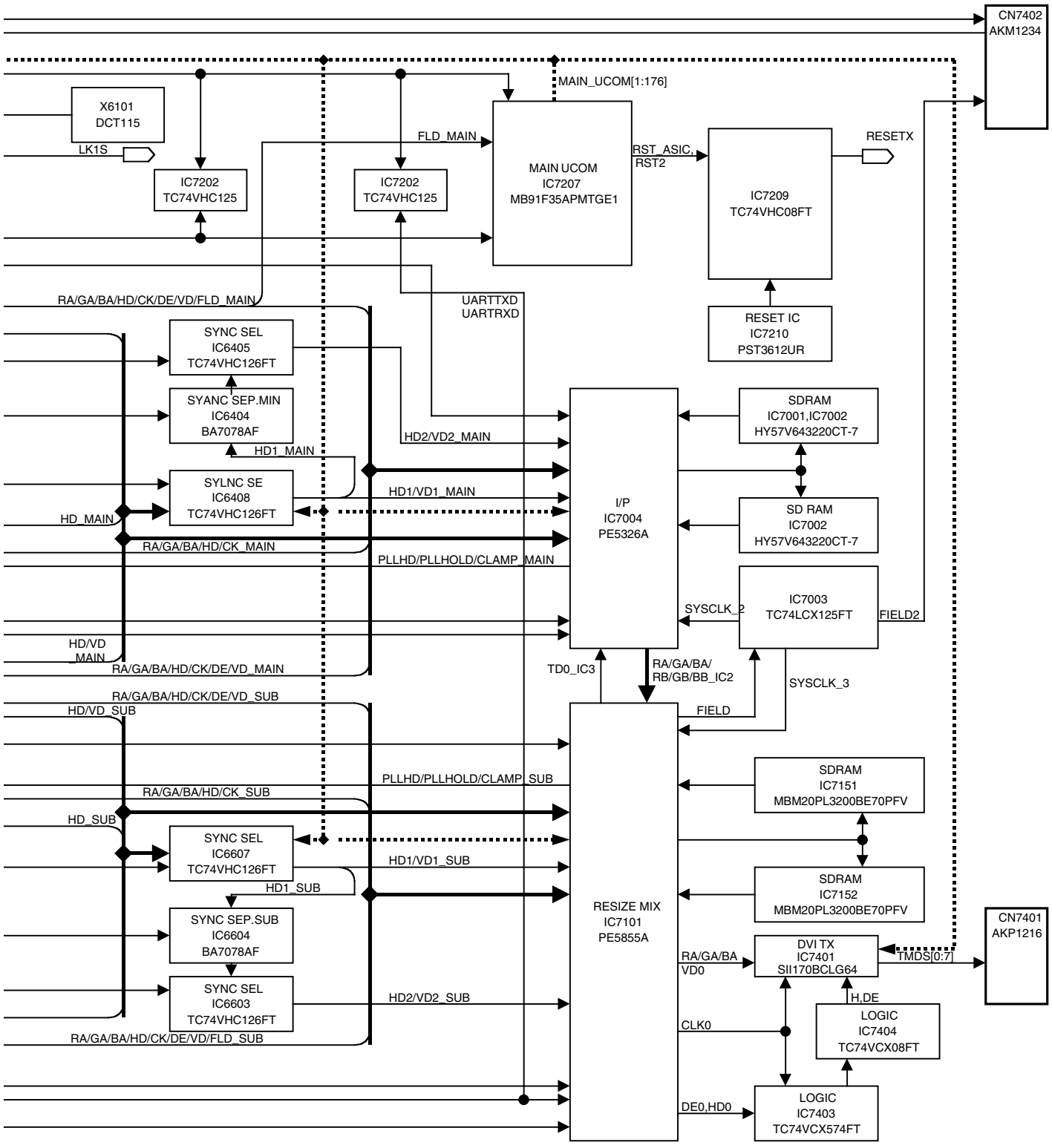
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

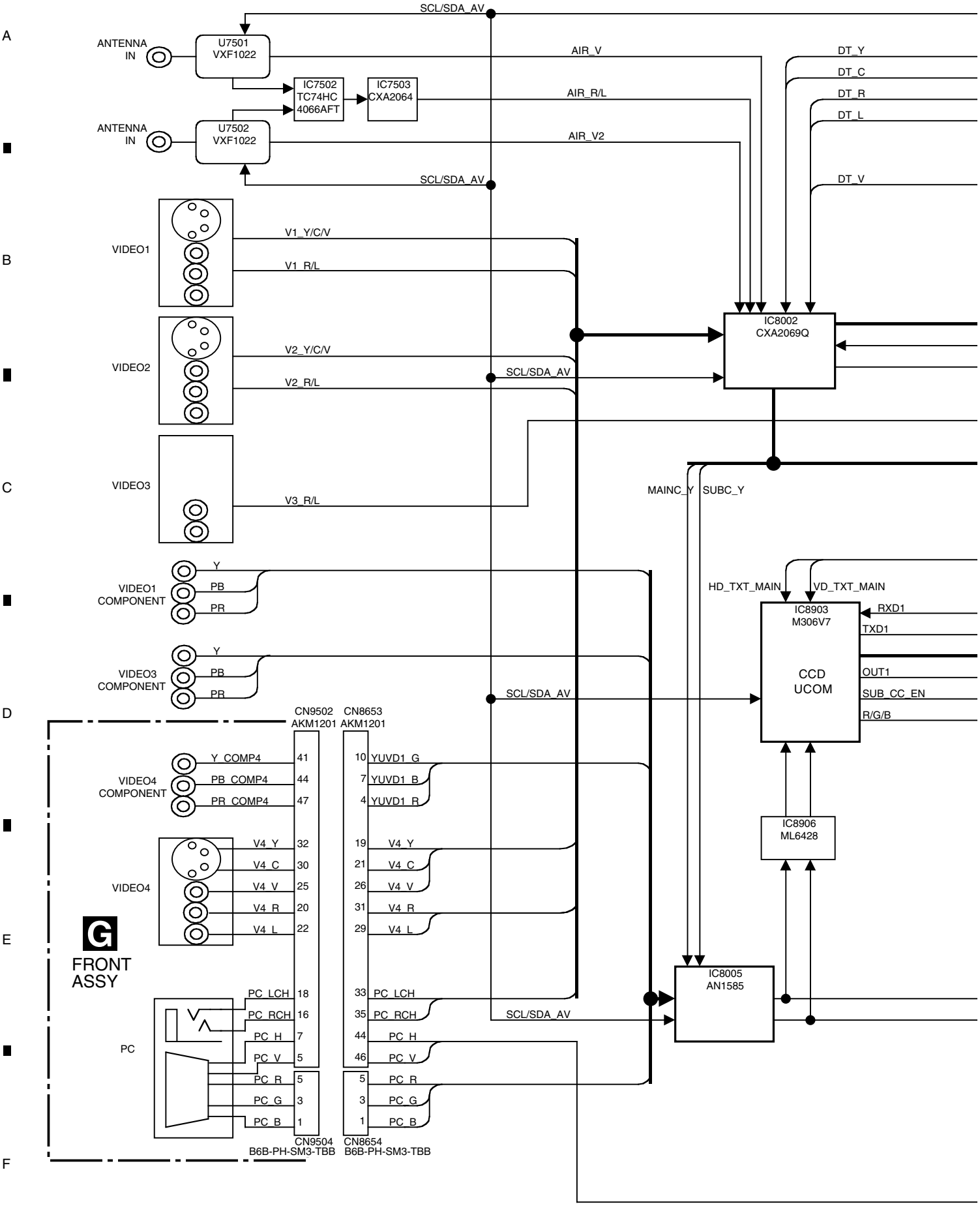
3.1.1 MR MAIN BOARD

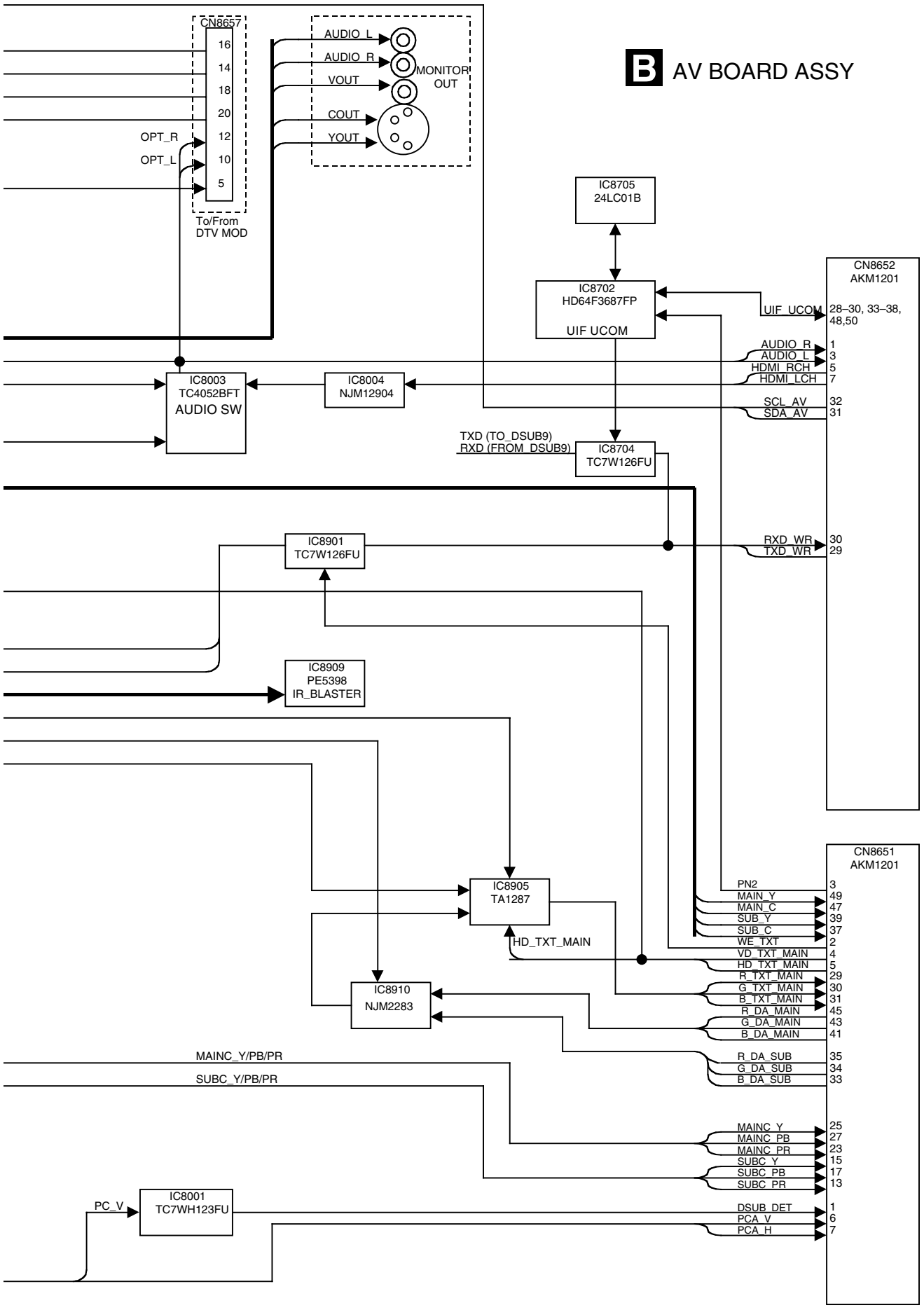
A MR MAIN BOARD ASSY



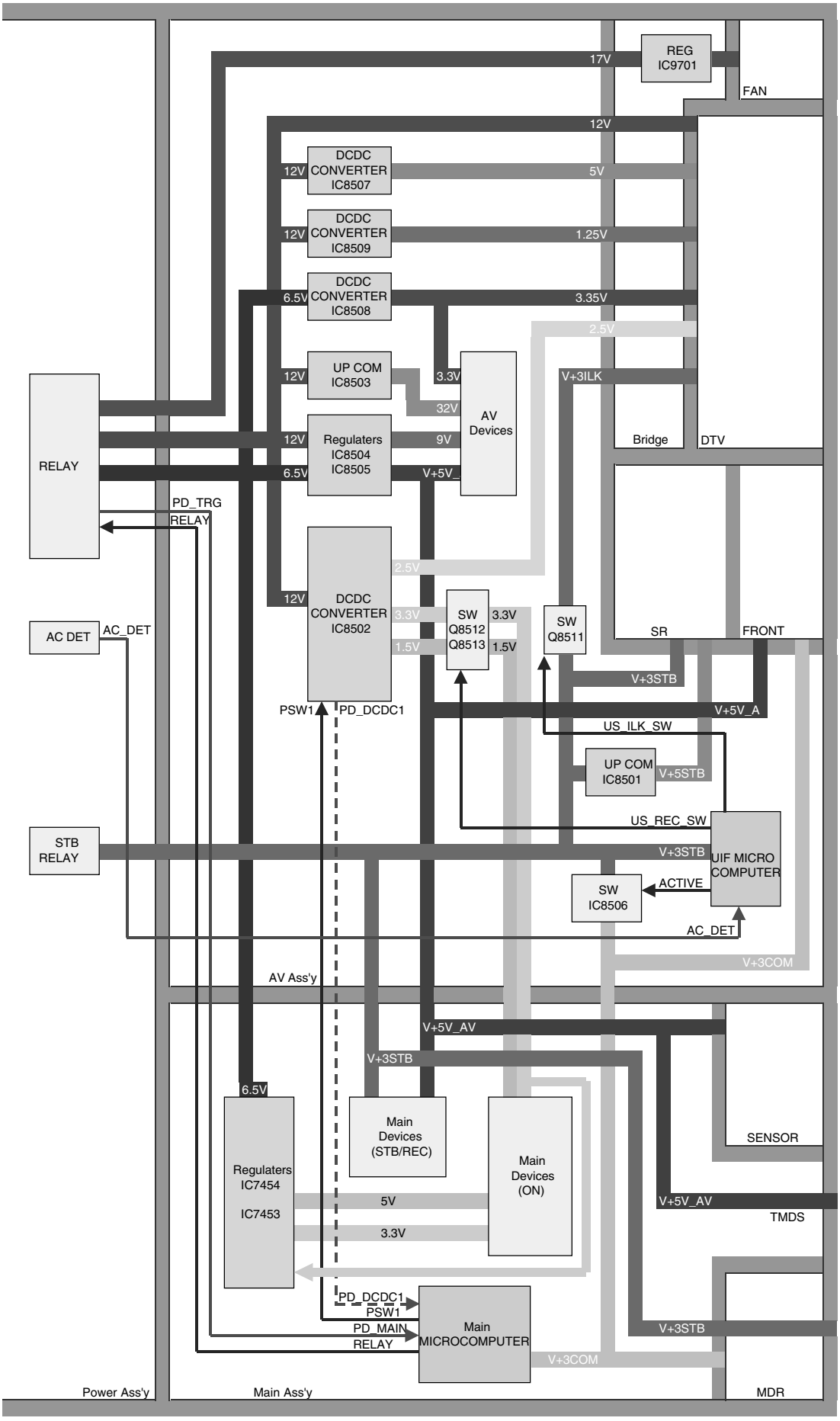

CN7402
AKM1234
MAIN_UCOM[1:176]
X6101
DCT115
LK1S
FLD_MAIN
MAIN UCOM
IC7207
MB91F35APMTGE1
RST_ASIC,
RST2
IC7209
TC74VHC08FT
RESETX
IC7202
TC74VHC125
IC7202
TC74VHC125
UARTTXD
UARTRXD
RESET IC
IC7210
PST3612UR
RA/GA/BA/HD/CK/DE/VD/FLD_MAIN
SYNC SEL
IC6405
TC74VHC126FT
SYANC SEP.MIN
IC6404
BA7078AF
HD2/VD2_MAIN
HD1_MAIN
SYLNC SE
IC6408
TC74VHC126FT
HD1/VD1_MAIN
HD_MAIN
RA/GA/BA/HD/CK_MAIN
PLLHD/PLLHOLD/CLAMP_MAIN
I/P
IC7004
PE5326A
SDRAM
IC7001,IC7002
HY57V643220CT-7
SD RAM
IC7002
HY57V643220CT-7
IC7003
TC74LCX125FT
SYSCLK_2
FIELD2
HD/VD
_MAIN
RA/GA/BA/HD/CK/DE/VD_MAIN
TD0_IC3
RA/GA/BA/
RB/GB/BB_IC2
SYSCLK_3
RA/GA/BA/HD/CK/DE/VD_SUB
HD/VD_SUB
FIELD
PLLHD/PLLHOLD/CLAMP_SUB
RA/GA/BA/HD/CK_SUB
HD_SUB
SDRAM
IC7151
MBM20PL3200BE70PFV
SYNC SEL
IC6607
TC74VHC126FT
HD1/VD1_SUB
HD1_SUB
SDRAM
IC7152
MBM20PL3200BE70PFV
RESIZE MIX
IC7101
PE5855A
SYNC SEP.SUB
IC6604
BA7078AF
CN7401
AKP1216
DVI TX
IC7401
SII170BCLG64
RA/GA/BA
VD0
TMDS[0:7]
SYNC SEL
IC6603
TC74VHC126FT
HD2/VD2_SUB
H,DE
LOGIC
IC7404
TC74VCX08FT
CLK0
RA/GA/BA/HD/CK/DE/VD/FLD_SUB
DE0,HD0
LOGIC
IC7403
TC74VCX574FT

3.1.2 AV BOARD ASSY

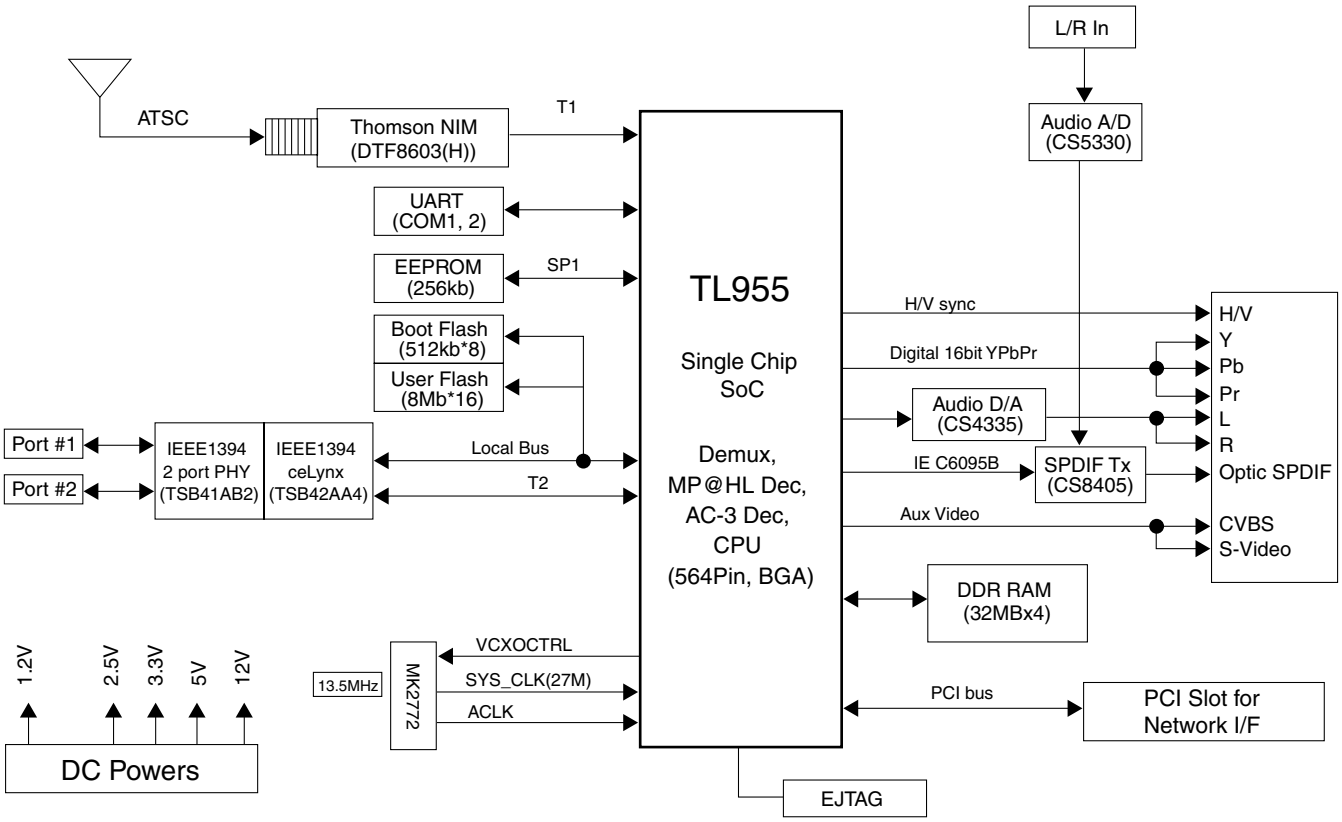



B AV BOARD ASSY
CN8657
16
14
18
20
12
10
5
OPT_R
OPT_L
To/From
DTV MOD
AUDIO_L
AUDIO_R
VOUT
COUT
YOUT
MONITOR
OUT
IC8705
24LC01B
IC8702
HD64F3687FP
UIF UCOM
CN8652
AKM1201
UIF_UCOM
28–30, 33–38,
48,50
AUDIO_R
AUDIO_L
HDMI_RCH
HDMI_LCH
SCL_AV
SDA_AV
1
3
5
7
32
31
IC8003
TC4052BFT
AUDIO SW
IC8004
NJM12904
TXD (TO_DSUB9)
RXD (FROM_DSUB9)
IC8704
TC7W126FU
IC8901
TC7W126FU
RXD_WR
TXD_WR
30
29
IC8909
PE5398
IR_BLASTER
CN8651
AKM1201
IC8905
TA1287
HD_TXT_MAIN
PN2
MAIN_Y
MAIN_C
SUB_Y
SUB_C
WE_TXT
VD_TXT_MAIN
HD_TXT_MAIN
R_TXT_MAIN
G_TXT_MAIN
B_TXT_MAIN
R_DA_MAIN
G_DA_MAIN
B_DA_MAIN
3
49
47
39
37
2
4
5
29
30
31
45
43
41
IC8910
NJM2283
MAINC_Y/PB/PR
SUBC_Y/PB/PR
R_DA_SUB
G_DA_SUB
B_DA_SUB
35
34
33
MAINC_Y
MAINC_PB
MAINC_PR
SUBC_Y
SUBC_PB
SUBC_PR
25
27
23
15
17
13
PC_V
IC8001
TC7WH123FU
DSUB_DET
PCA_V
PCA_H
1
6
7

3.1.3 POWER SUPPLY UNIT



3.1.4 DTV TUNER BOARD



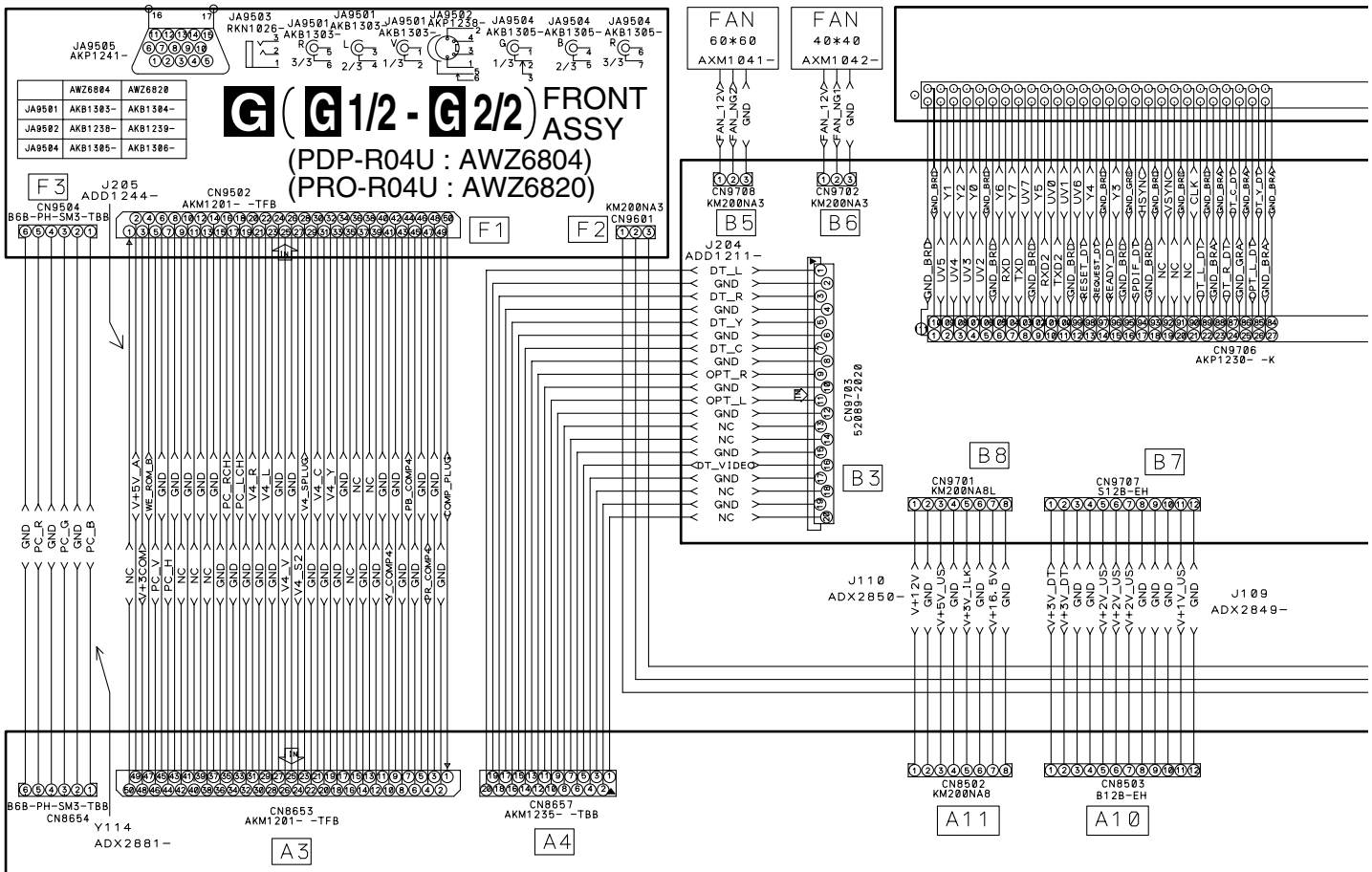
Interface spec between MAIN and DRM (110 Pin Connector)

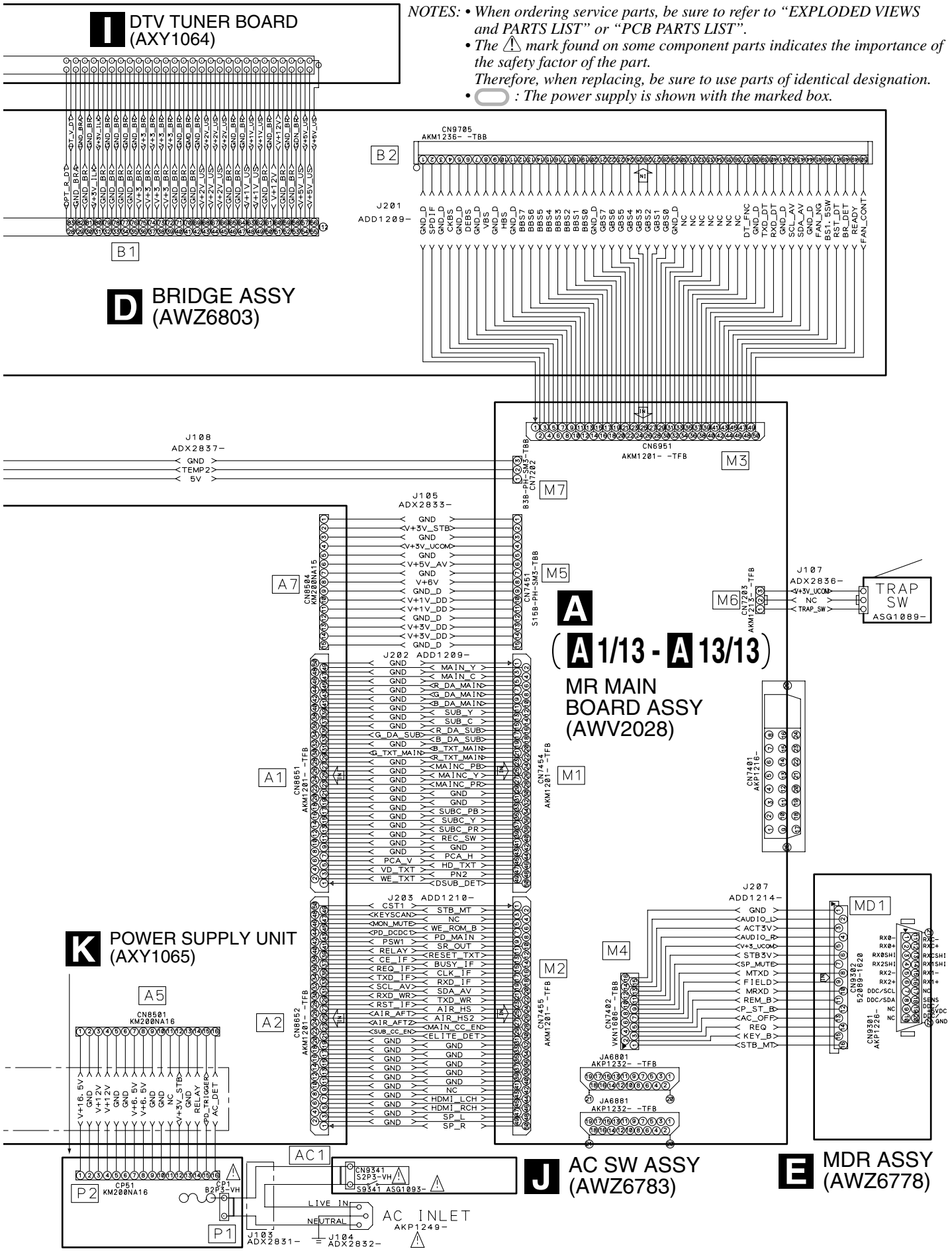
	Symbol	Dir.	Voltage	Description	Remark	Torerance	
						V_{OH_MIN}	V_{OL_MAX}
						V_{IH_MIN}	V_{IL_MAX}
						Tolerance	
Control	TxD	Out	3.3V	UART	TTL	2.4	0.4
	RxD	In	3.3V	UART	TTL	2.0	0.8
	TxD	Out	3.3V	UART for Update	TTL	2.4	0.4
	RxD	In	3.3V	UART for Update	TTL	2.0	0.8
	Reset	In	3.3V	Module reset	TTL (Active low)	2.0	0.8
	Ready	Out	3.3V	ready flag	TTL (Active low)	2.4	0.4
	Request	Out	3.3V	request flag	TTL (Active low)	2.4	0.4
Video	Y0	Out	3.3V	digital output	TTL	2.4	0.4
	Y1	Out	3.3V	”	TTL	2.4	0.4
	Y2	Out	3.3V	”	TTL	2.4	0.4
	Y3	Out	3.3V	”	TTL	2.4	0.4
	Y4	Out	3V	”	TTL	2.4	0.4
	Y5	Out	3.3V	”	TTL	2.4	0.4
	Y6	Out	3.3V	”	TTL	2.4	0.4
	Y7	Out	3.3V	”	TTL	2.4	0.4
	PbPr0	Out	3.3V	”	TTL	2.4	0.4
	PbPr1	Out	3.3V	”	TTL	2.4	0.4
	PbPr2	Out	3.3V	”	TTL	2.4	0.4
	PbPr3	Out	3.3V	”	TTL	2.4	0.4
	PbPr4	Out	3.3V	”	TTL	2.4	0.4
	PbPr5	Out	3.3V	”	TTL	2.4	0.4
	PbPr6	Out	3.3V	”	TTL	2.4	0.4
	PbPr7	Out	3.3V	”	TTL	2.4	0.4
	Hsync	Out	3.3V	”	TTL (Active low)	2.4	0.4
	Vsync	Out	3.3V	”	TTL (Active low)	2.4	0.4
	CLK	Out	3.3V	”	TTL (Active low)	2.4	0.4
	CVBS	Out	1Vp-p	analog output	Buffer out	+/-10%	
	Y	Out	1Vp-p	”	Buffer out	+/-10%	
	C	Out	0.286Vp-p burst level	”	Buffer out	+/-10%	
Audio	Lout	Out	2Vrms FS	analog output	<1kohm	+/-5%	
	Rout	Out	2Vrms FS	”	<1kohm	+/-5%	
	Lin	In	2.8Vrms FS	analog input	>10kohm		
	Rin	In	2.8Vrms FS	”	>10kohm		
Power	12V	In	12V			± 5%	
	5V	In	5V			± 5%	
	3.3V	In	3.3V			± 5%	
	3.3V2	In	3.3V	for network standby		± 5%	
	2.5V	In	2.5V			± 5%	
	1.31V	In	1.31V			± 5%	

Pin Assignment

Pin No.	name	in/out	Remarks	Pin No.	name	in/out	Remarks
1	D_GND			56	5V		
2	Y1	out		57	5V		
3	Y2	out		58	P_GND		
4	Y0	out		59	P_GND		
5	5D_GND			60	12V		
6	Y6	out		61	P_GND		
7	Y7	out		62	1.31V		
8	PbPr7	out		63	1.31V		
9	Y5	out		64	P_GND		
10	PbPr0	out		65	P_GND		
11	PbPr1	out		66	2.5V		
12	PbPr6	out		67	2.5V		
13	Y4	out		68	2.5V		
14	D_GND			69	P_GND		
15	Y3	out		70	P_GND		
16	D_GND			71	P_GND		
17	H sync	out		72	3.3V		
18	D_GND			73	3.3V		
19	V sync	out		74	3.3V		
20	D_GND			75	3.3V		
21	CLK	out		76	P_GND		
22	D_GND			77	P_GND		
23	A_GND			78	P_GND		
24	C	out		79	P_GND		
25	A_GND			80	3.3V2		for Network standby
26	Y	out		81	P_GND		
27	A_GND			82	A_GND		
28	CVBS	out		83	R_in	in	MAIN > DTV
29	A_GND			84	A_GND		
30	P_GND			85	L_in	in	MAIN > DTV
31	3.3V2		for Network standby	86	A_GND		
32	P_GND			87	R_out	out	DTV > MAIN
33	P_GND			88	A_GND		
34	P_GND			89	L_out	out	DTV > MAIN
35	P_GND			90	Reserved		
36	3.3V			91	Reserved		
37	3.3V			92	Reserved		
38	3.3V			93	D_GND		
39	3.3V			94	SPDIF	in	
40	P_GND			95	D_GND		
41	P_GND			96	READY	out	
42	P_GND			97	REQUEST	out	
43	2.5V			98	RESET	in	
44	2.5V			99	D_GND		
45	2.5V			100	TXD2	out	DTV > MAIN for update
46	P_GND			101	RXD2	in	MAIN > DTV for update
47	P_GND			102	D_GND		
48	1.31V			103	TXD	out	DTV > MAIN
49	1.31V			104	RXD	in	MAIN > DTV
50	P_GND			105	D_GND		
51	12V			106	PbPr2	out	
52	P_GND			107	PbPr3	out	
53	P_GND			108	PbPr4	out	
54	5V			109	PbPr5	out	
55	5V			110	D_GND		

3.2 OVERALL WIRING DIAGRAM



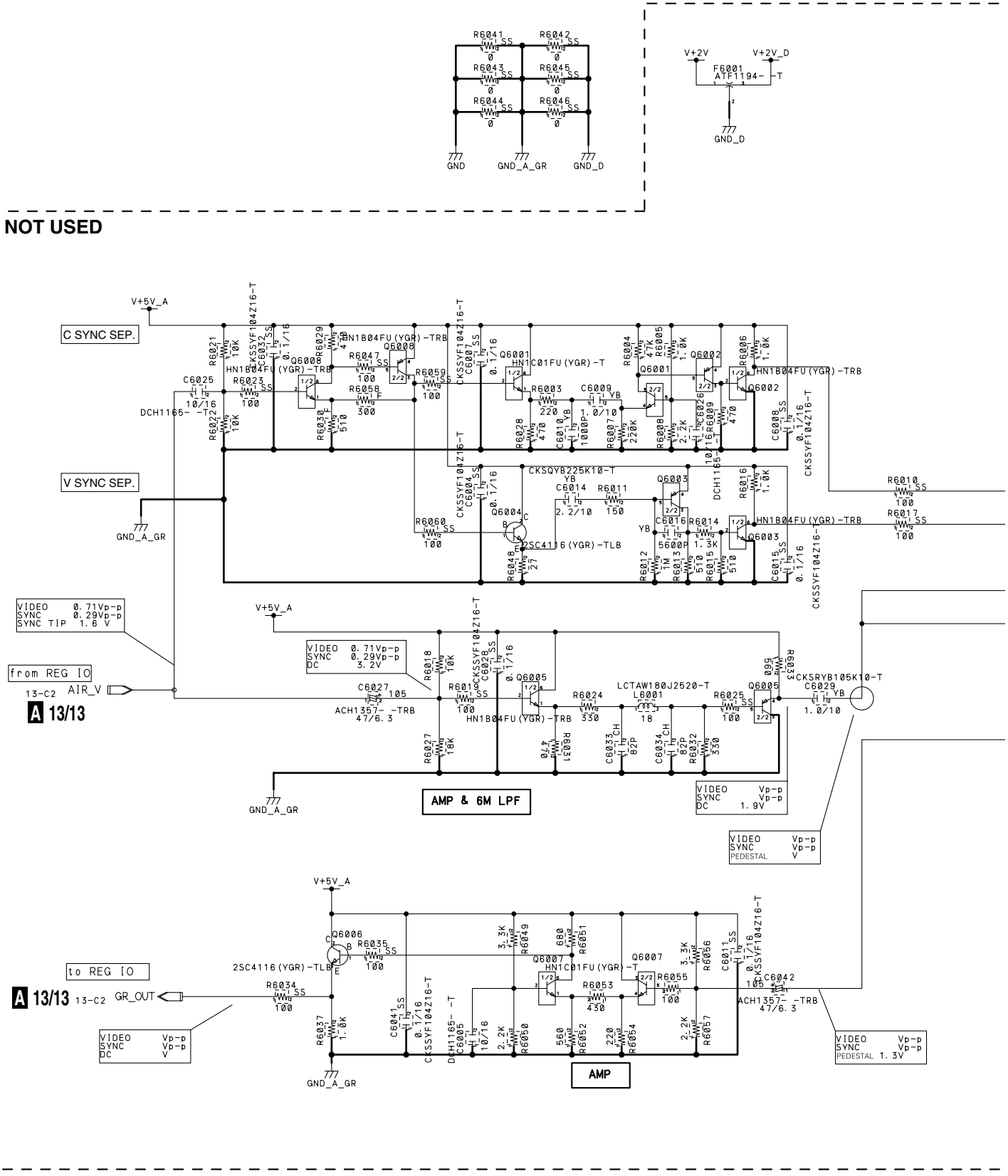


NOTES: • *When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".*
• *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part.*
Therefore, when replacing, be sure to use parts of identical designation.
• *: The power supply is shown with the marked box.*

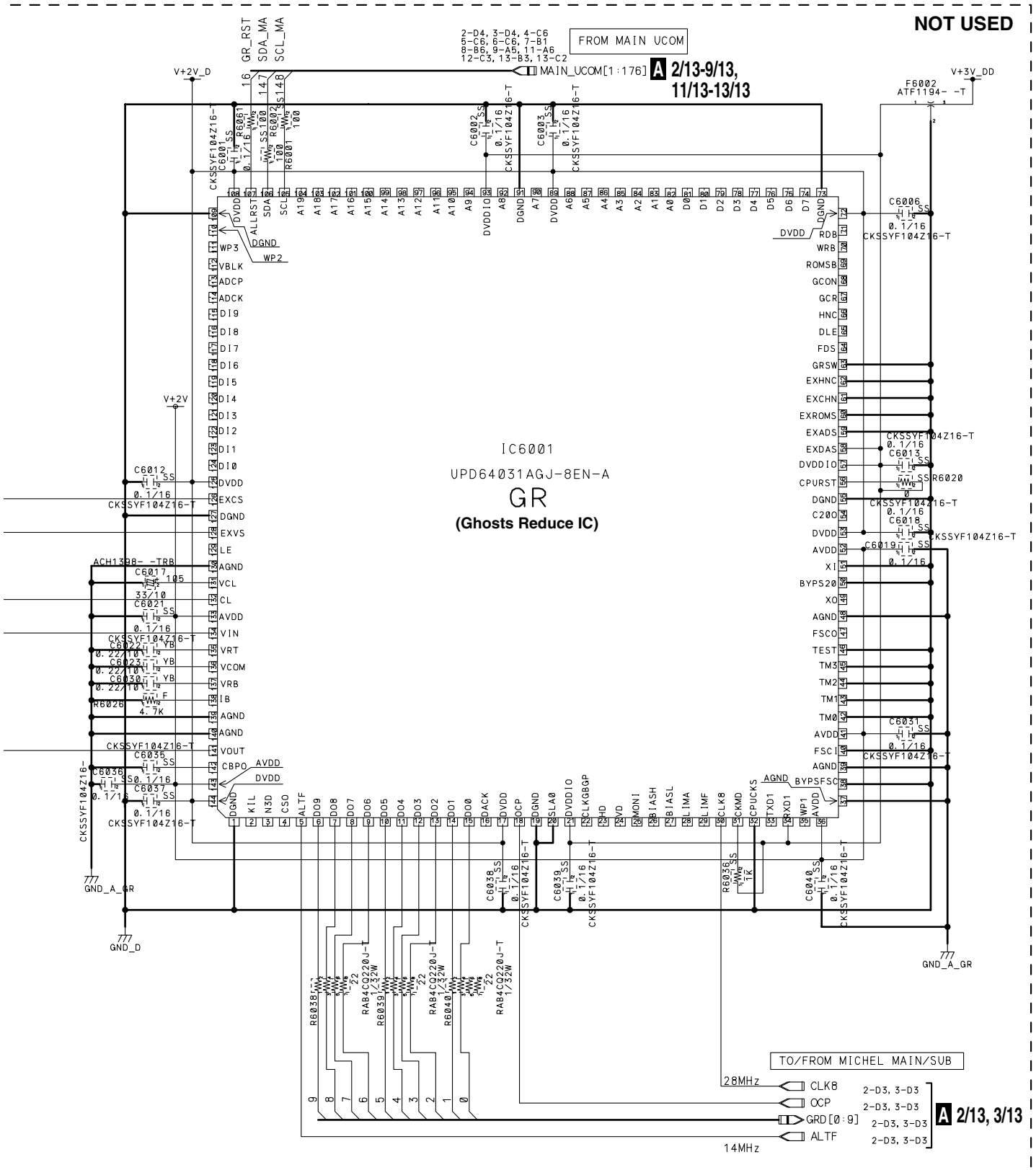
3.3 MR MAIN BOARD ASSY (1/13)

A 1/13 MR MAIN BOARD ASSY (AWV2028)

● **GR BLOCK**



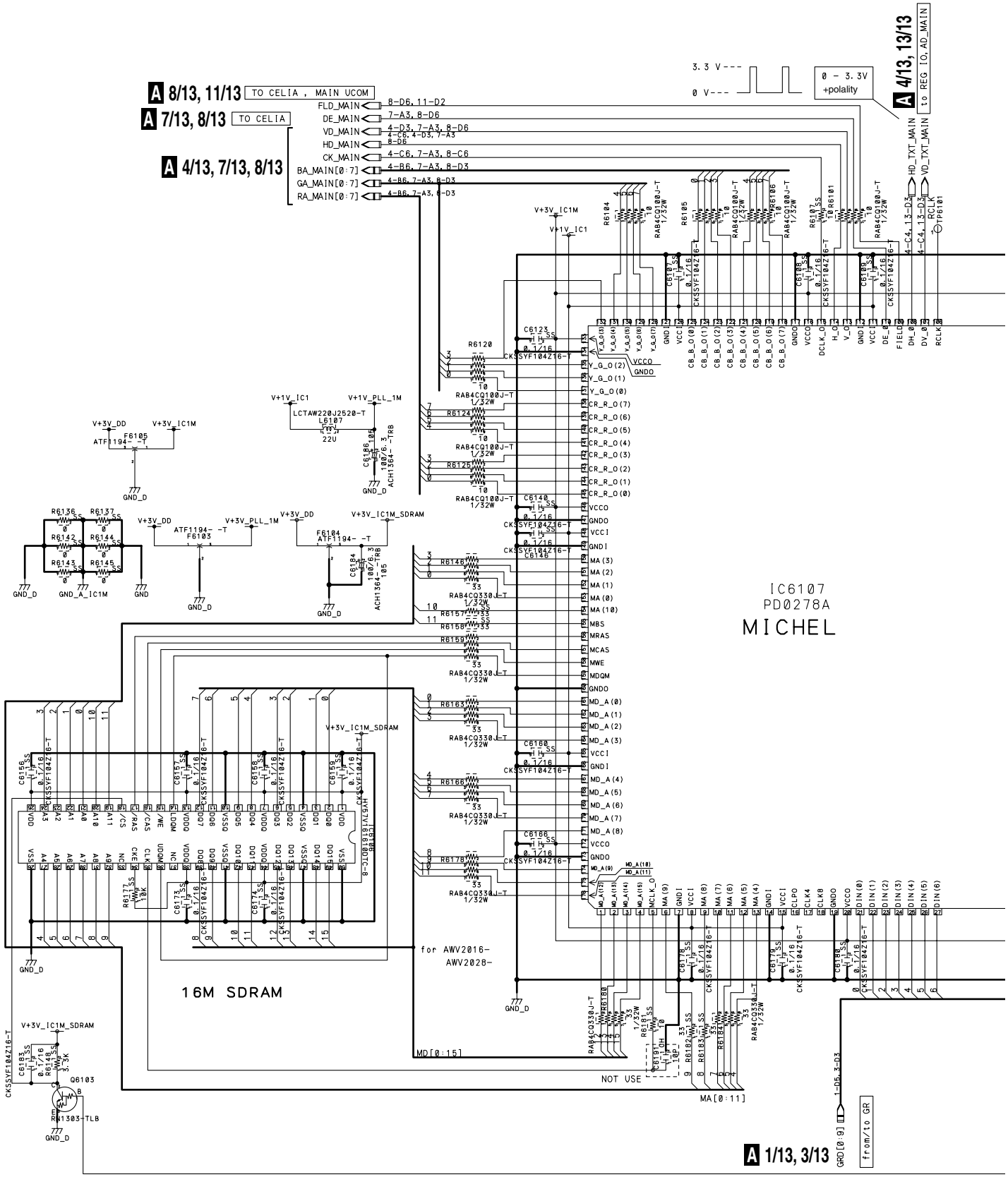
A 1/13

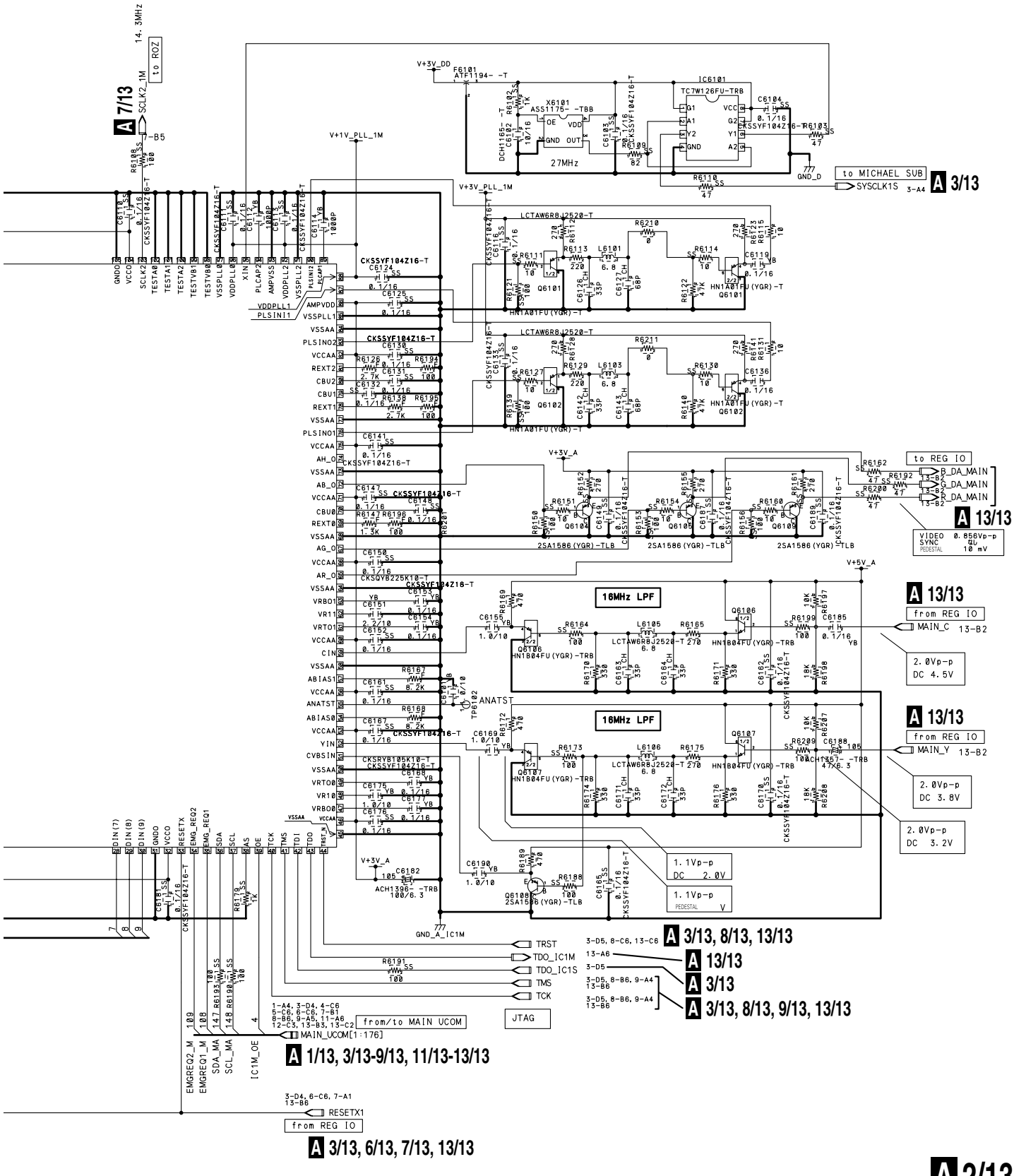

NOT USED
FROM MAIN UCOM
2-D4, 3-D4, 4-C6
5-C6, 6-C6, 7-B1
8-B6, 9-A5, 11-A6
12-C3, 13-B3, 13-C2
MAIN_UCOM[1:176]
A 2/13-9/13, 11/13-13/13
V+2V_D
V+3V_DD
V+2V
GR_RST
SDA_MA
SCL_MA
F6002
ATF1194- -T
IC6001
UPD64031AGJ-8EN-A
GR
(Ghosts Reduce IC)
ACH1398- -TRB
GND_A_GR
GND_D
TO/FROM MICHEL MAIN/SUB
28MHz
14MHz
CLK8
OCP
GRD[0:9]
ALTF
2-D3, 3-D3
A 2/13, 3/13

3.4 MR MAIN BOARD ASSY (2/13)

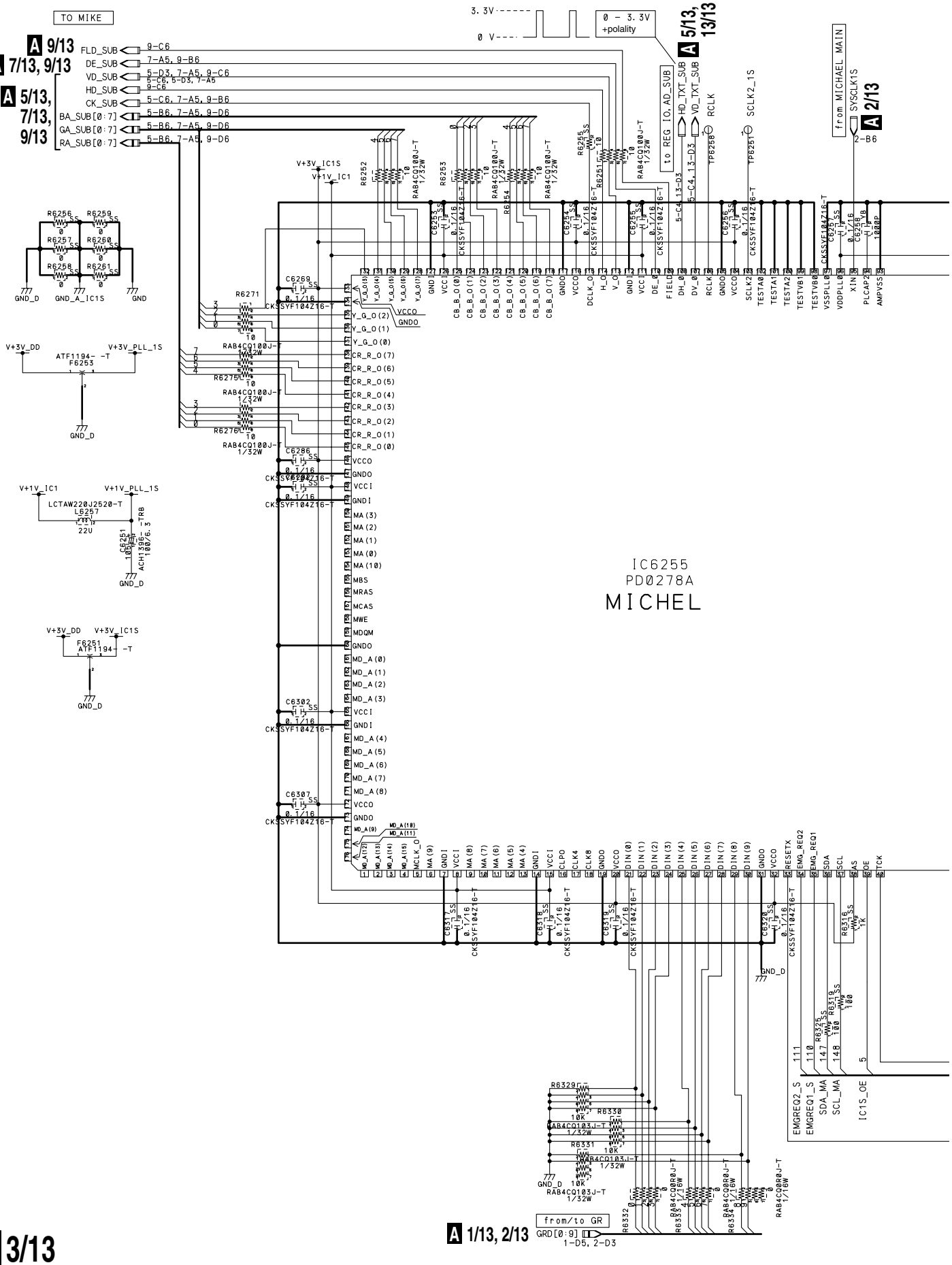
A 2/13 MR MAIN BOARD ASSY (AWV2028)

● **MICHEL MAIN BLOCK**



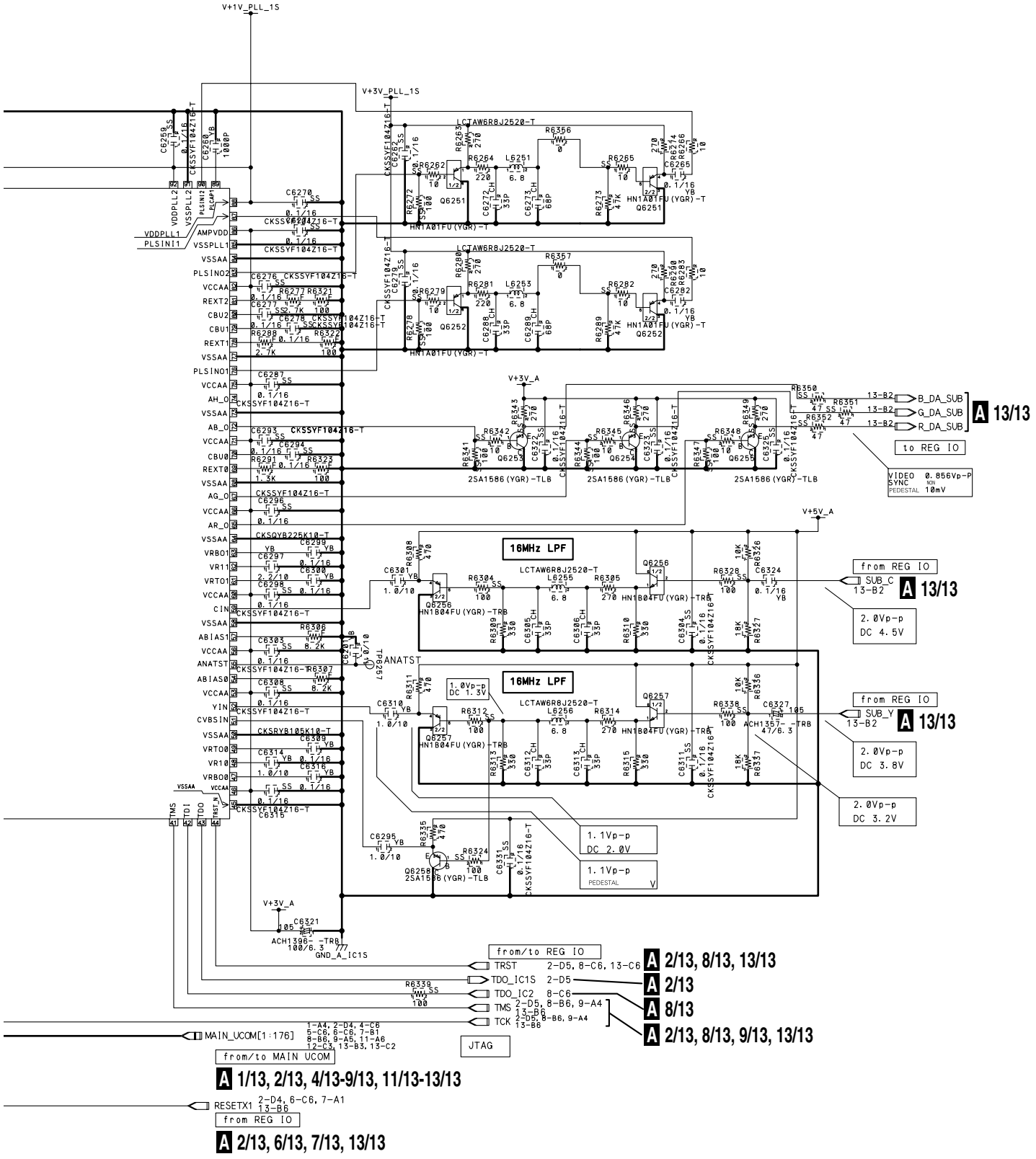

A 7/13
14.3MHz
to ROZ
SCLK2_1M
V+3V_DD
V+1V_PLL_1M
V+3V_PLL_1M
27MHz
to MICHAEL SUB
SYSCLK1S
A 3/13
CKSSYF104Z16-T
LCTAW6R8J2520-T
HN1A01FU(YGR)-T
HN1B04FU(YGR)-TRB
2SA1586(YGR)-TLB
V+3V_A
V+5V_A
to REG IO
B_DA_MAIN
G_DA_MAIN
R_DA_MAIN
A 13/13
VIDEO SYNC PEDESTAL
0.856Vp-p
0V
10mV
16MHz LPF
from REG IO
MAIN_C
MAIN_Y
2.0Vp-p
DC 4.5V
DC 3.8V
DC 3.2V
1.1Vp-p
DC 2.0V
PEDESTAL
ANATST
TRST
TDO_IC1M
TDO_IC1S
TMS
TCK
JTAG
A 3/13, 8/13, 13/13
A 13/13
A 3/13
A 3/13, 8/13, 9/13, 13/13
from/to MAIN UCOM
MAIN_UCOM[1:176]
A 1/13, 3/13-9/13, 11/13-13/13
RESETX1
from REG IO
A 3/13, 6/13, 7/13, 13/13
A 2/13

3.5 MR MAIN BOARD ASSY (3/13)



A 3/13 MR MAIN BOARD ASSY (AWV2028)

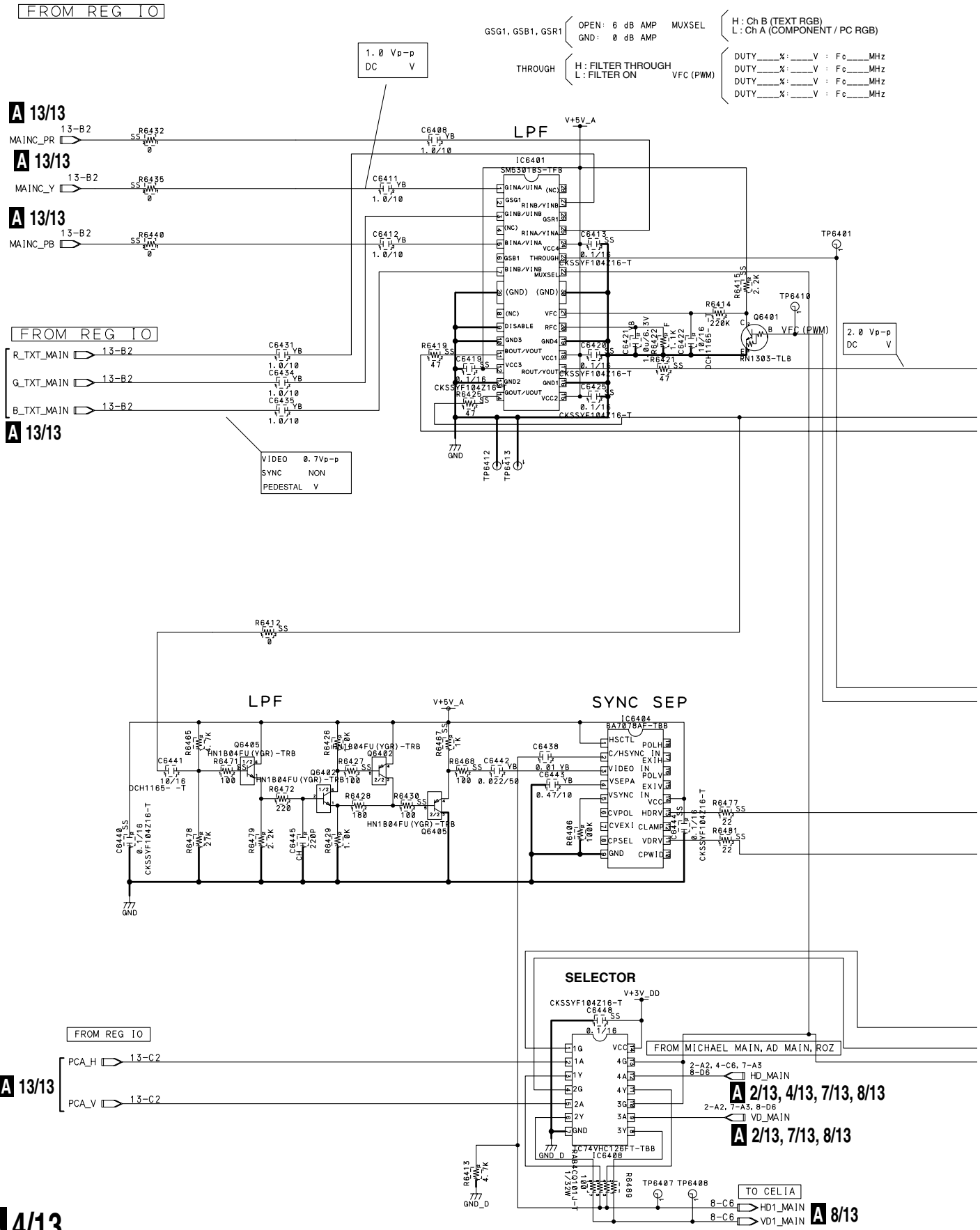
● **MICHEL SUB BLOCK**

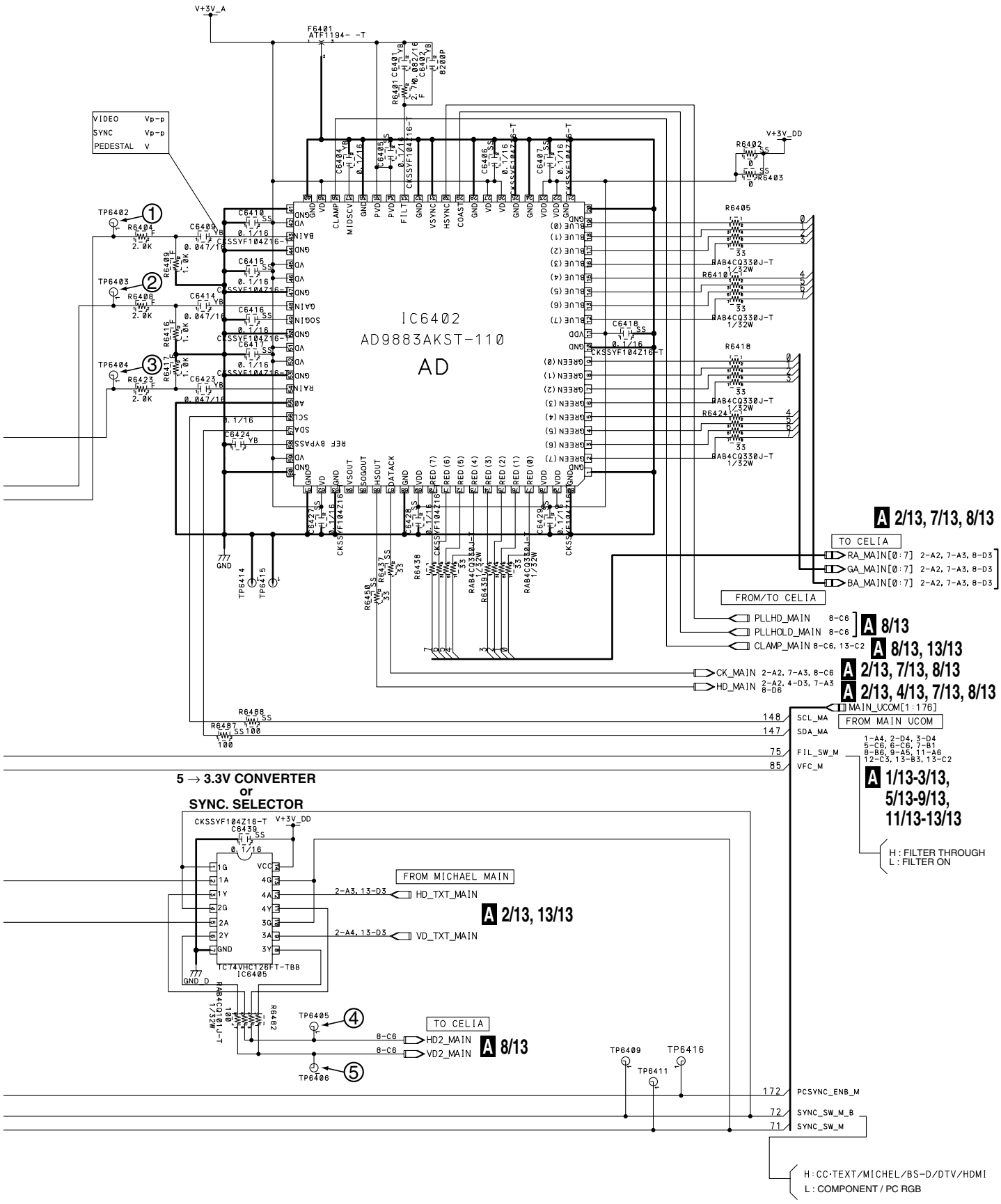


3.6 MR MAIN BOARD ASSY (4/13)

A 4/13 MR MAIN BOARD ASSY (AWV2028)

● **AD MAIN BLOCK**

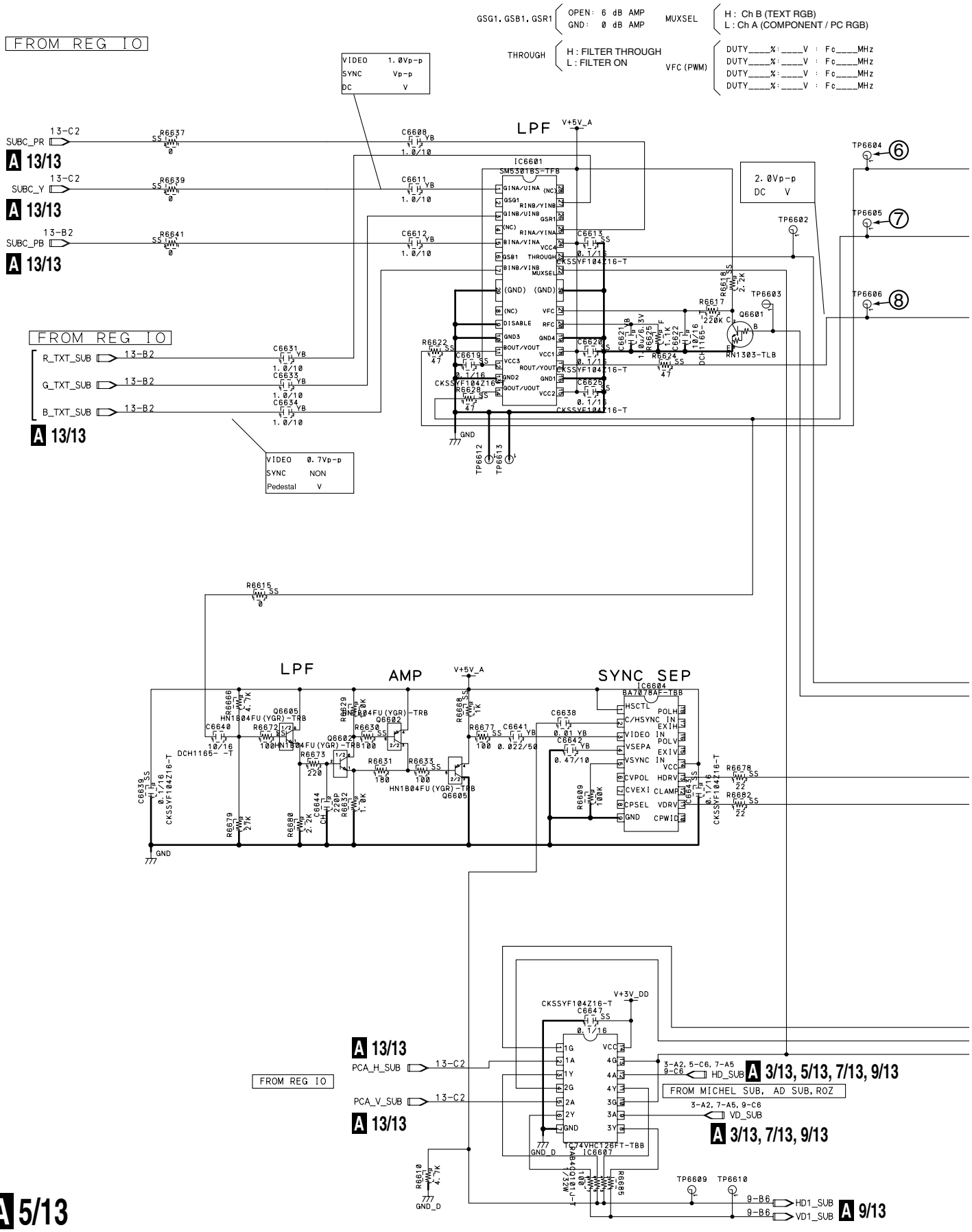


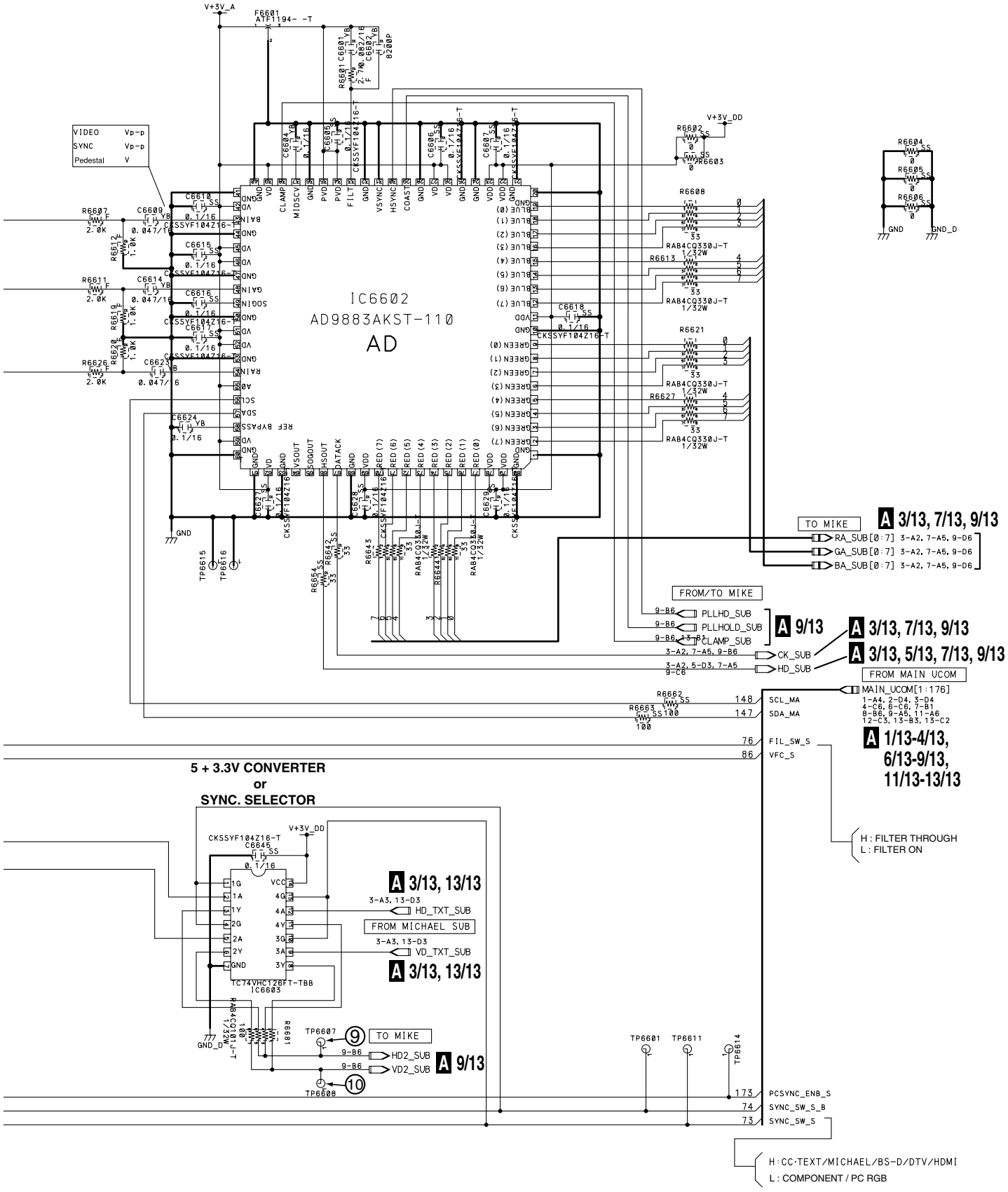

IC6402
AD9883AKST-110
AD
VIDEO Vp-p
SYNC Vp-p
PEDESTAL V
A 2/13, 7/13, 8/13
TO CELIA
RA_MAIN[0:7] 2-A2, 7-A3, 8-D3
GA_MAIN[0:7] 2-A2, 7-A3, 8-D3
BA_MAIN[0:7] 2-A2, 7-A3, 8-D3
FROM/TO CELIA
PLLHD_MAIN 8-C6
PLLHOLD_MAIN 8-C6
A 8/13
CLAMP_MAIN 8-C6, 13-C2
A 8/13, 13/13
CK_MAIN 2-A2, 7-A3, 8-C6
A 2/13, 7/13, 8/13
HD_MAIN 2-A2, 4-D3, 7-A3 8-D6
A 2/13, 4/13, 7/13, 8/13
MAIN_UCOM[1:176]
FROM MAIN UCOM
SCL_MA
SDA_MA
FIL_SW_M
VFC_M
1-A4, 2-D4, 3-D4 5-C6, 6-C6, 7-B1 8-B6, 9-A5, 11-A6 12-C3, 13-B3, 13-C2
A 1/13-3/13, 5/13-9/13, 11/13-13/13
H : FILTER THROUGH
L : FILTER ON
5 → 3.3V CONVERTER or SYNC. SELECTOR
FROM MICHAEL MAIN
HD_TXT_MAIN
VD_TXT_MAIN
A 2/13, 13/13
TC74VHC126FT-TBB
IC6405
TO CELIA
HD2_MAIN
VD2_MAIN
A 8/13
PCSYNC_ENB_M
SYNC_SW_M_B
SYNC_SW_M
H : CC·TEXT/MICHEL/BS-D/DTV/HDMI
L : COMPONENT / PC RGB
A 4/13

3.7 MR MAIN BOARD ASSY (5/13)

A 5/13 MR MAIN BOARD ASSY (AWV2028)

● **AD SUB BLOCK**



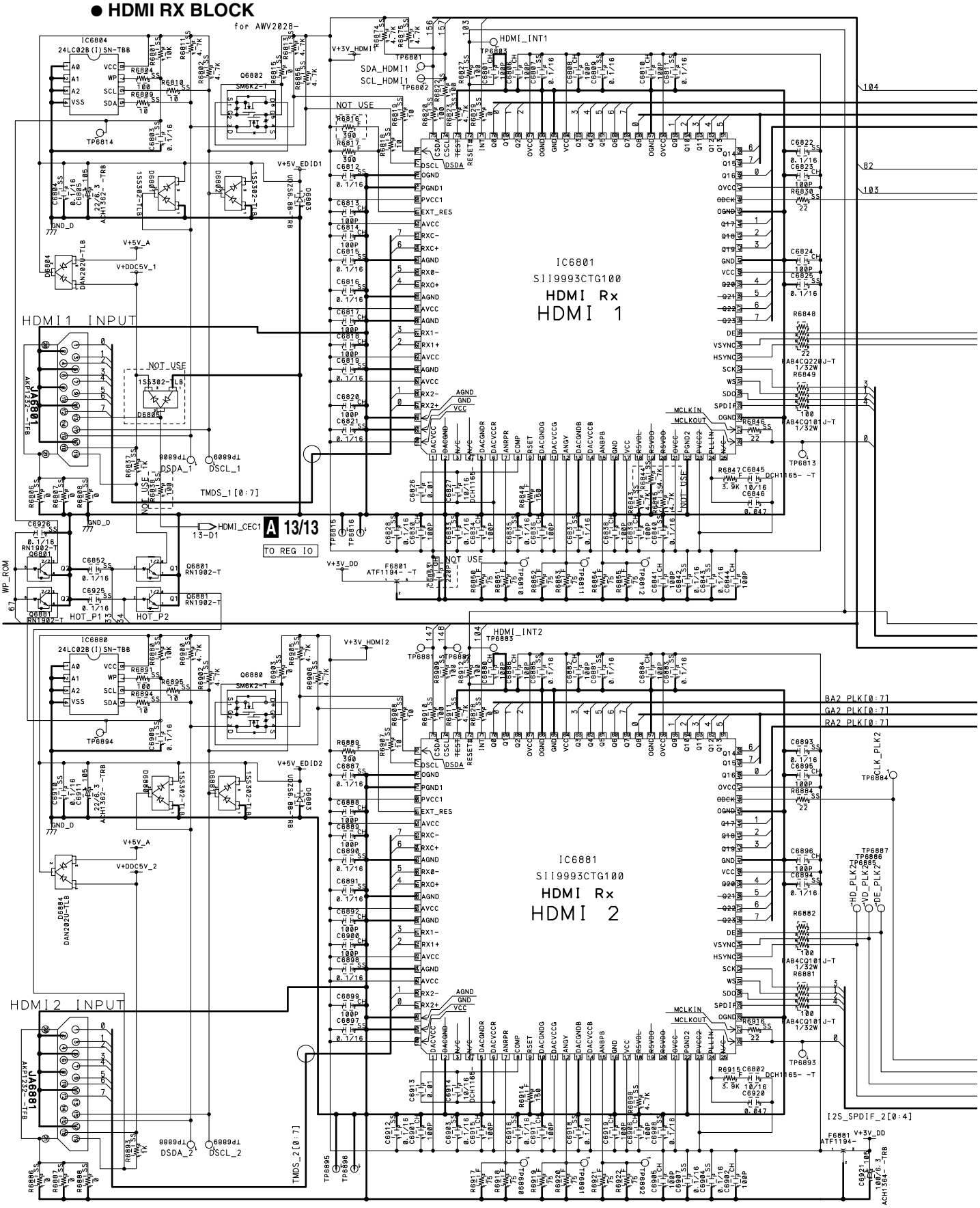

IC6602
AD9883AKST-110
AD
VIDEO Vp-p
SYNC Vp-p
Pedestal V
TO MIKE
A 3/13, 7/13, 9/13
RA_SUB[0:7] 3-A2, 7-A5, 9-D6
GA_SUB[0:7] 3-A2, 7-A5, 9-D6
BA_SUB[0:7] 3-A2, 7-A5, 9-D6
FROM/TO MIKE
PLLHD_SUB
PLLHOLD_SUB
CLAMP_SUB
A 9/13
A 3/13, 7/13, 9/13
CK_SUB
HD_SUB
A 3/13, 5/13, 7/13, 9/13
FROM MAIN UCOM
MAIN_UCOM[1:176]
1-A4, 2-D4, 3-D4
4-C6, 6-C6, 7-B1
8-B6, 9-A5, 11-A6
12-C3, 13-B3, 13-C2
A 1/13-4/13, 6/13-9/13, 11/13-13/13
SCL_MA
SDA_MA
FIL_SW_S
VFC_S
H : FILTER THROUGH
L : FILTER ON
5 + 3.3V CONVERTER
or
SYNC. SELECTOR
A 3/13, 13/13
HD_TXT_SUB
FROM MICHAEL SUB
VD_TXT_SUB
A 3/13, 13/13
TC74VHC126FT-TBB
IC6603
TO MIKE
HD2_SUB
VD2_SUB
A 9/13
PCSYNC_ENB_S
SYNC_SW_S_B
SYNC_SW_S
H : CC·TEXT/MICHAEL/BS-D/DTV/HDMI
L : COMPONENT / PC RGB

A 5/13

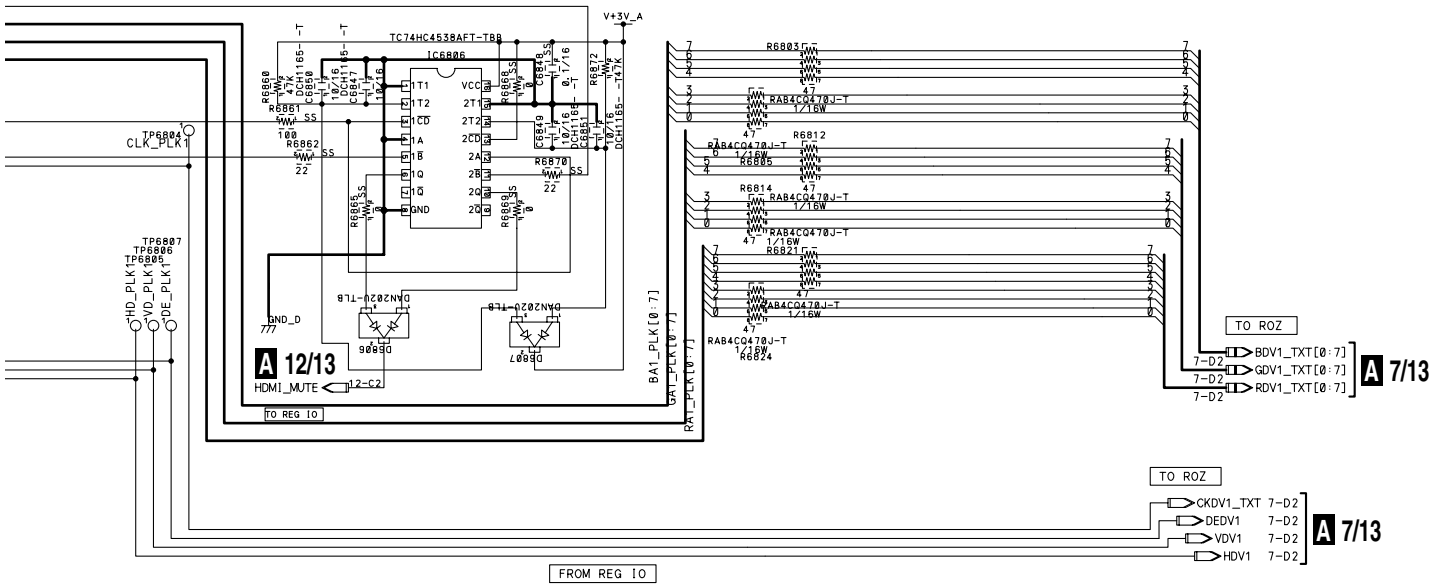
3.8 MR MAIN BOARD ASSY (6/13)

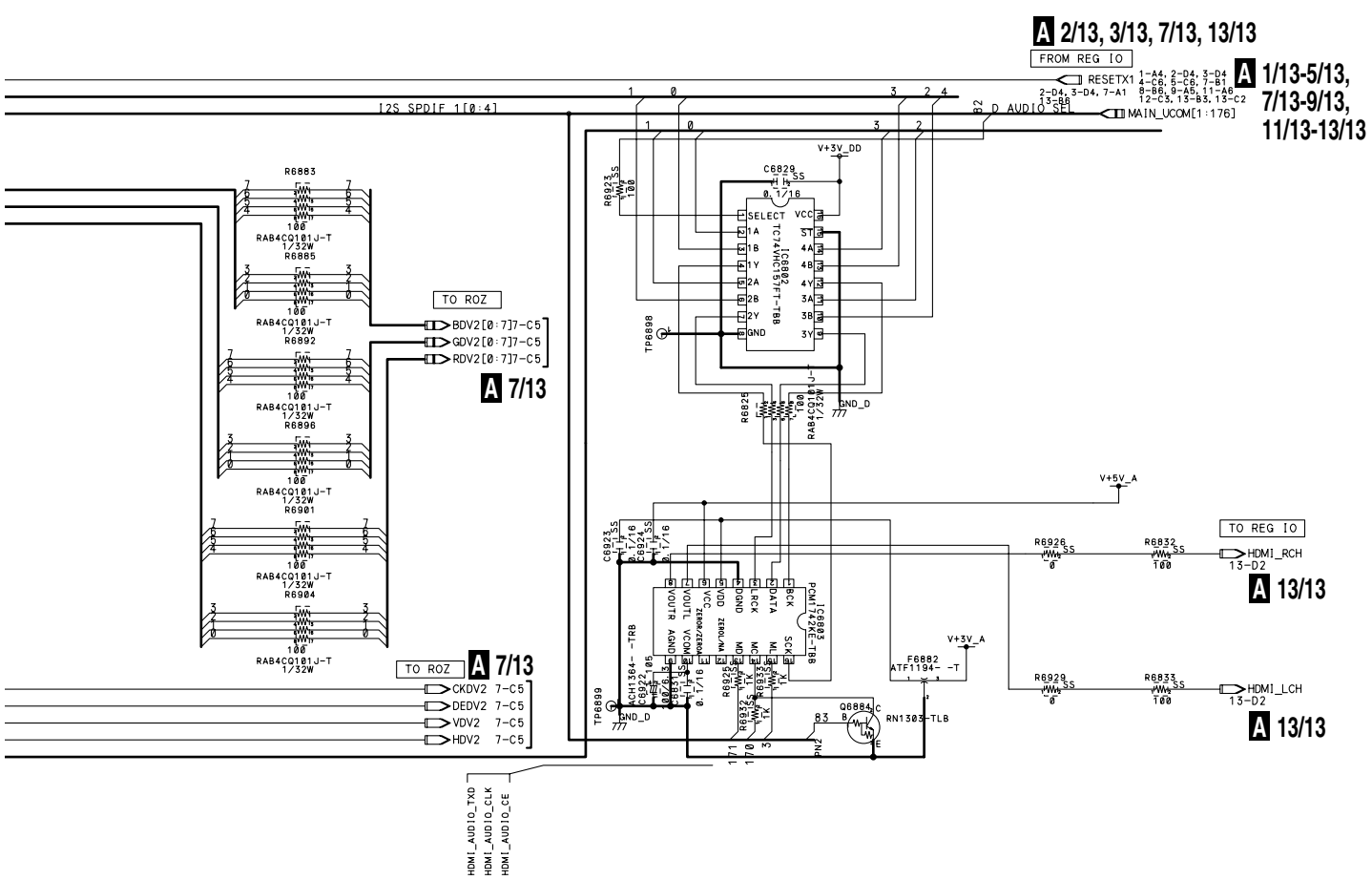
A 6/13 MR MAIN BOARD ASSY (AWV2028)

● **HDMI RX BLOCK**



A 6/13

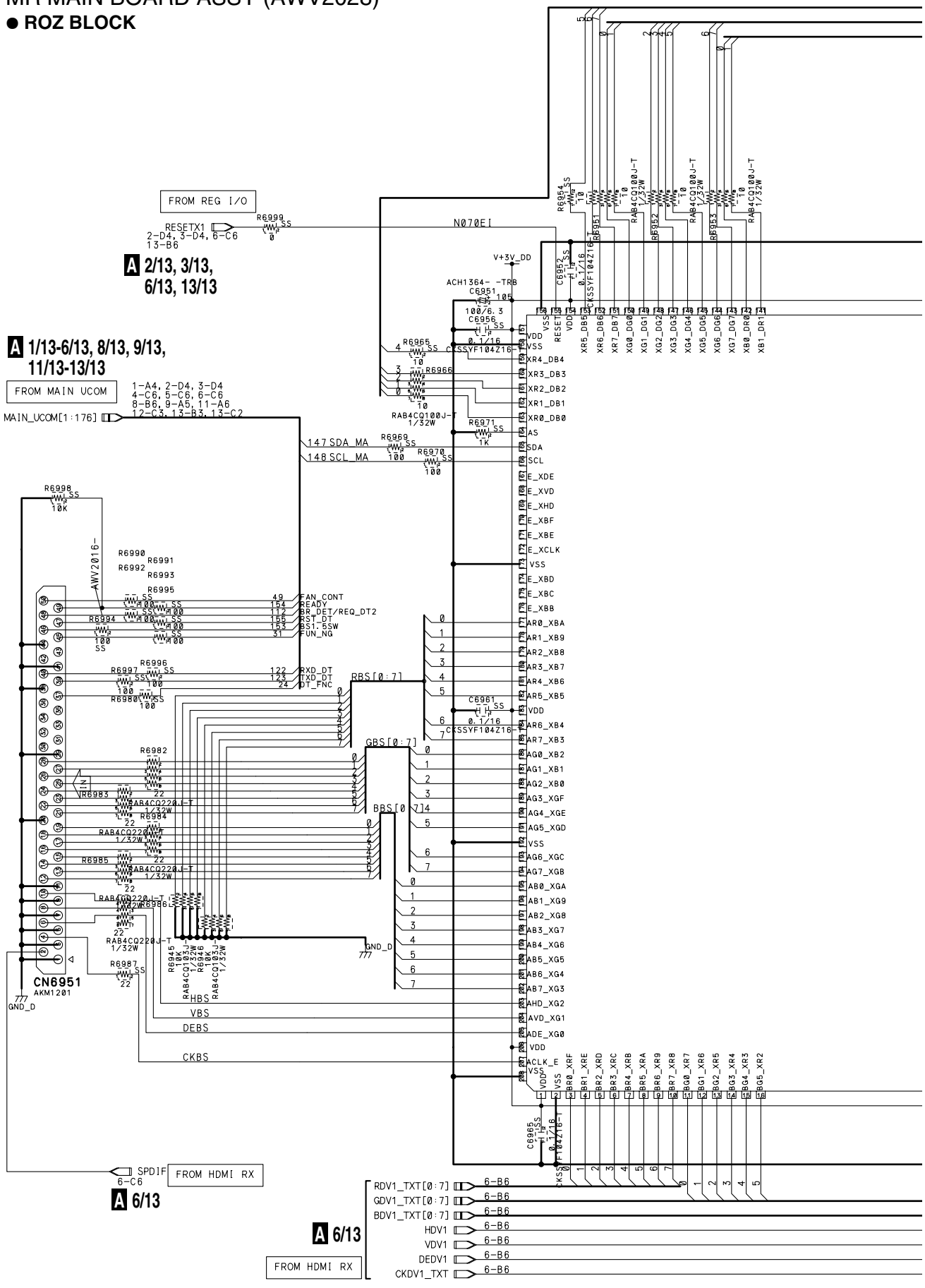

TC74HC4538AFT-TBB
IC6806
V+3V_A
CLK_PLK
HD_PLK
VD_PLK
DE_PLK
GND_D
HDMI_MUTE
TO REG IO
FROM REG IO
BA1_PLK[0:7]
RA1_PLK[0:7]
TO ROZ
BDV1_TXT[0:7]
GDV1_TXT[0:7]
RDV1_TXT[0:7]
CKDV1_TXT
DEDV1
VDV1
HDV1
A 12/13
A 7/13

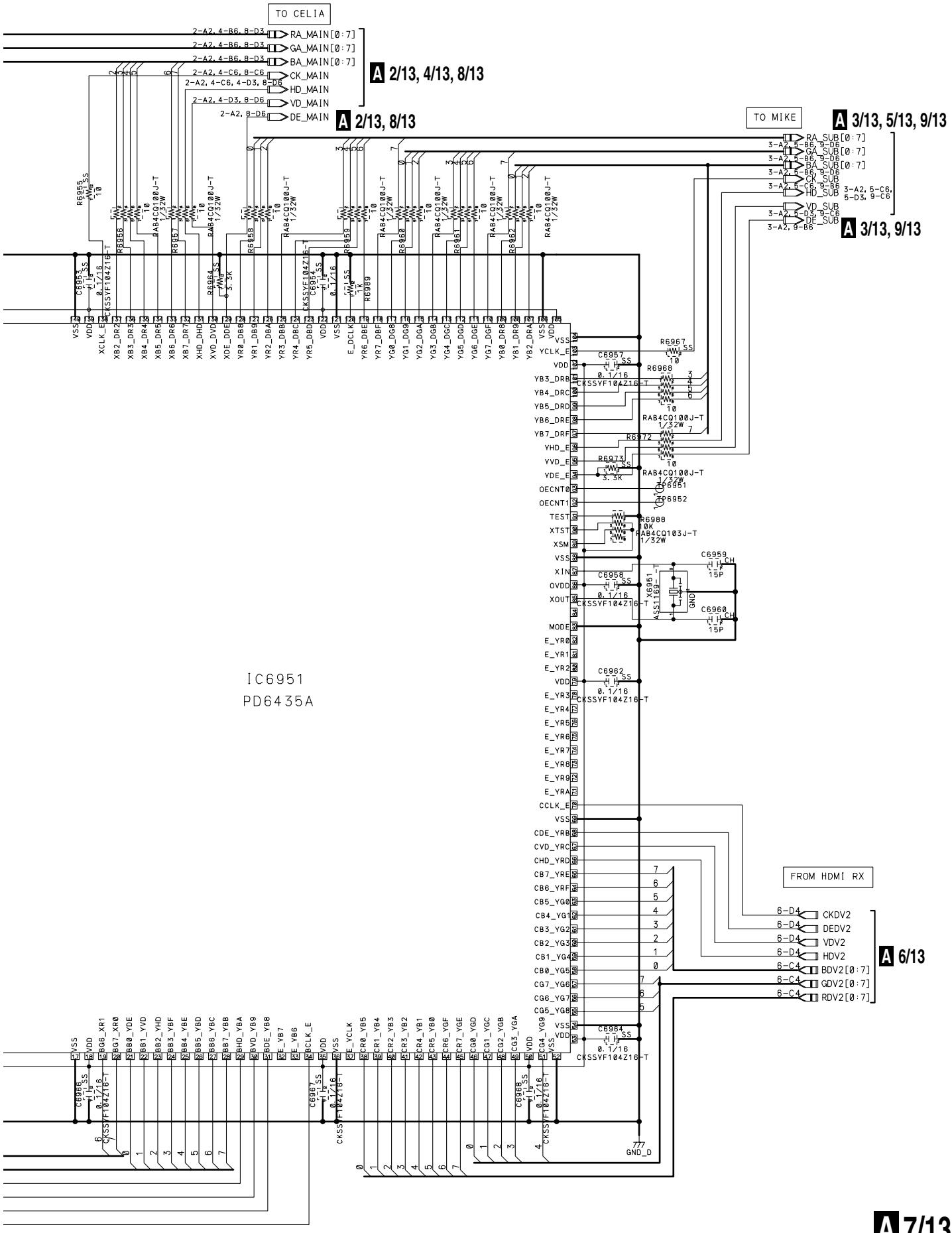

A 2/13, 3/13, 7/13, 13/13
FROM REG IO
RESETX1
MAIN_UCOM[1:176]
A 1/13-5/13, 7/13-9/13, 11/13-13/13
I2S_SPDIF_1[0:4]
I2_D_AUDIO_SEL
V+3V_DD
SELECT
TC74VHC157FT-TBB
IC6802
TO ROZ
BDV2[0:7]7-C5
GDV2[0:7]7-C5
RDV2[0:7]7-C5
CKDV2 7-C5
DEDV2 7-C5
VDV2 7-C5
HDV2 7-C5
A 7/13
V+5V_A
PCM1742E-TBB
IC6803
TO REG IO
HDMI_RCH
HDMI_LCH
13-D2
A 13/13
V+3V_A
F6882
ATF1194- -T
RN1303-TLB
HDMI_AUDIO_TXD
HDMI_AUDIO_CLK
HDMI_AUDIO_CE
A 6/13

3.9 MR MAIN BOARD ASSY (7/13)

A 7/13 MR MAIN BOARD ASSY (AWV2028)

● **ROZ BLOCK**

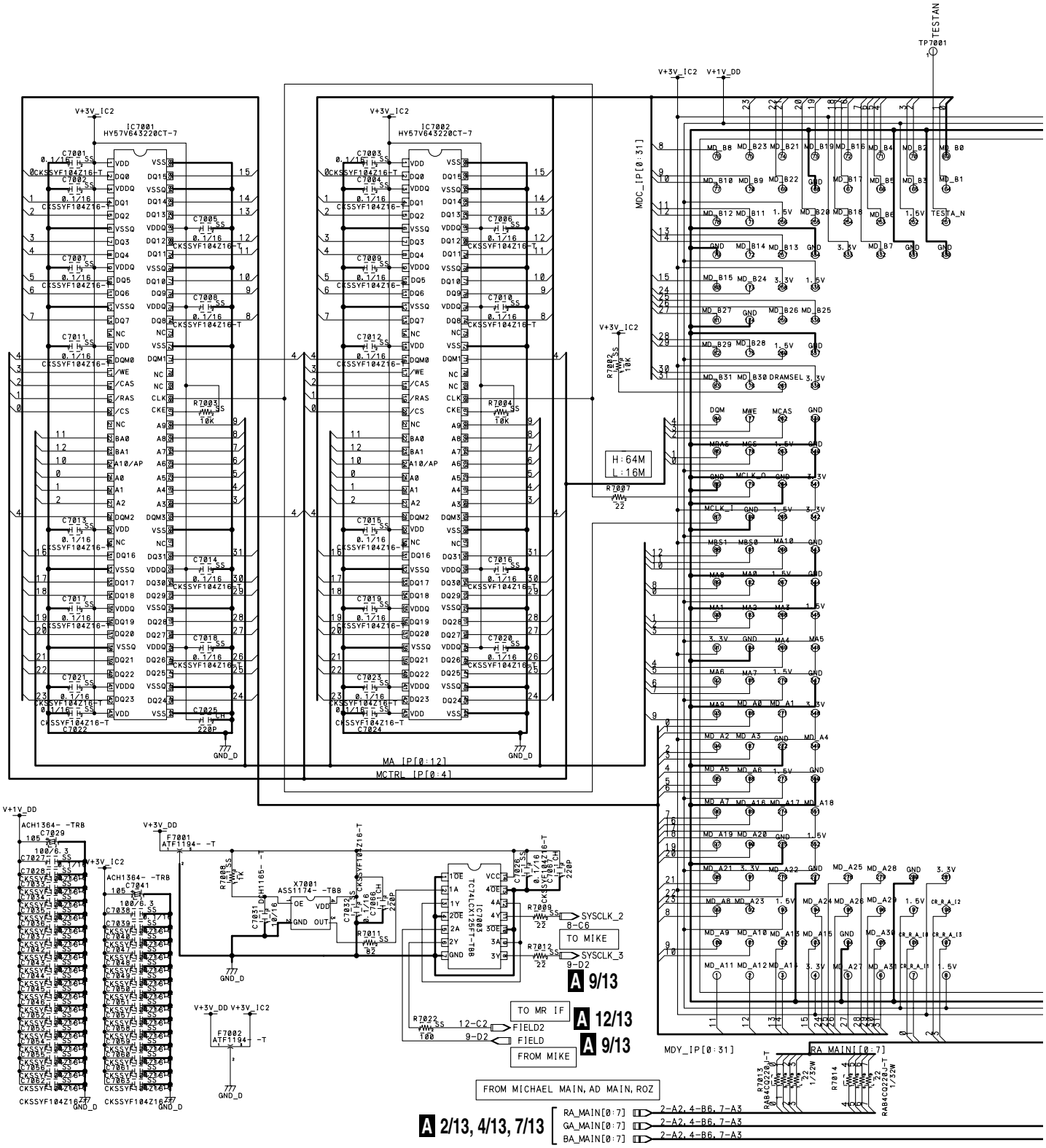



TO CELIA
RA_MAIN[0:7]
GA_MAIN[0:7]
BA_MAIN[0:7]
CK_MAIN
HD_MAIN
VD_MAIN
DE_MAIN
A 2/13, 4/13, 8/13
A 2/13, 8/13
TO MIKE
A 3/13, 5/13, 9/13
RA_SUB[0:7]
GA_SUB[0:7]
BA_SUB[0:7]
CK_SUB
HD_SUB
VD_SUB
DE_SUB
A 3/13, 9/13
IC6951
PD6435A
FROM HDMI RX
CKDV2
DEDV2
VDV2
HDV2
BDV2[0:7]
GDV2[0:7]
RDV2[0:7]
A 6/13
GND_D
A 7/13

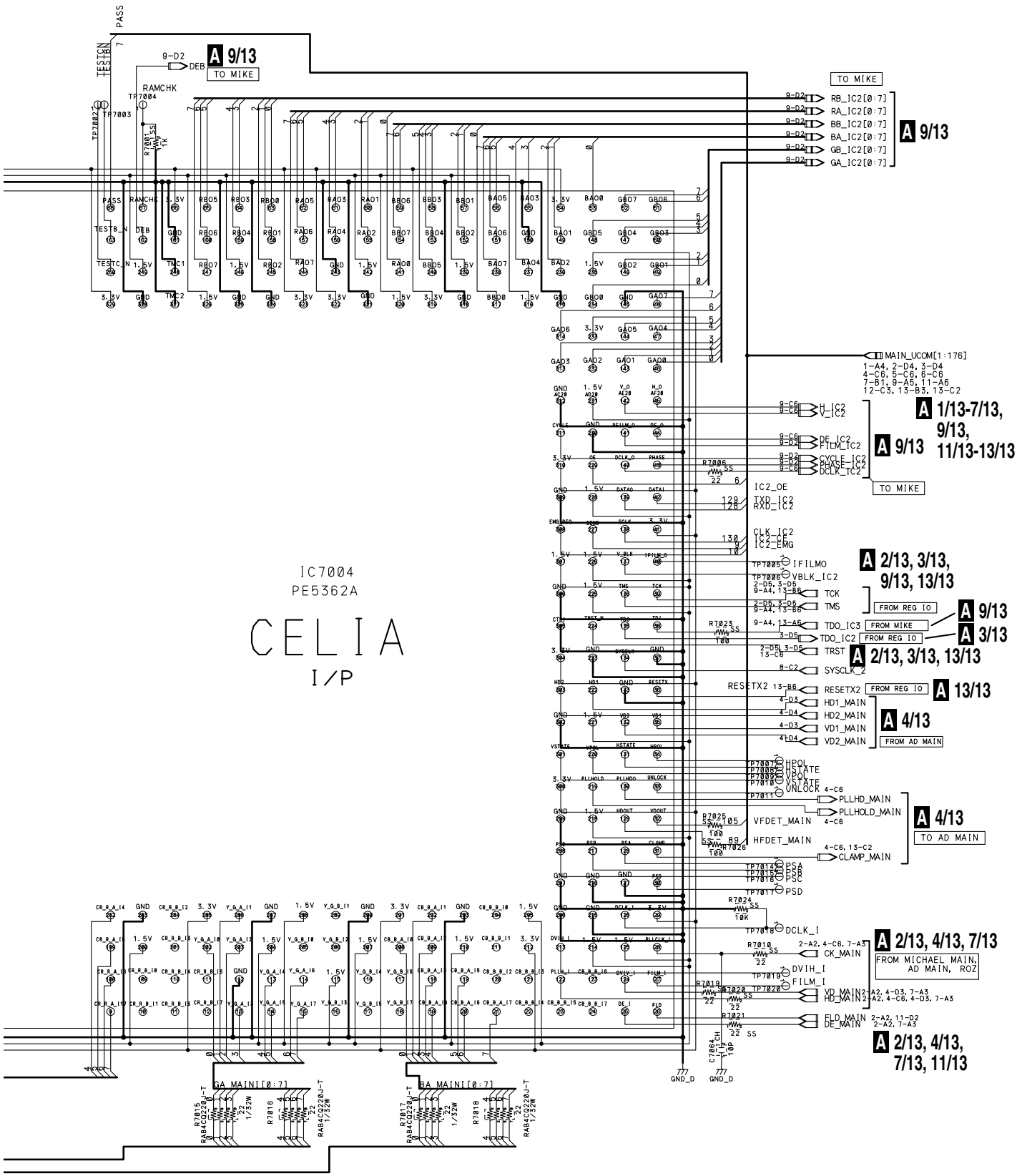
3.10 MR MAIN BOARD ASSY (8/13)

A 8/13 MR MAIN BOARD ASSY (AWV2028)

● **CELIA BLOCK**



A 8/13

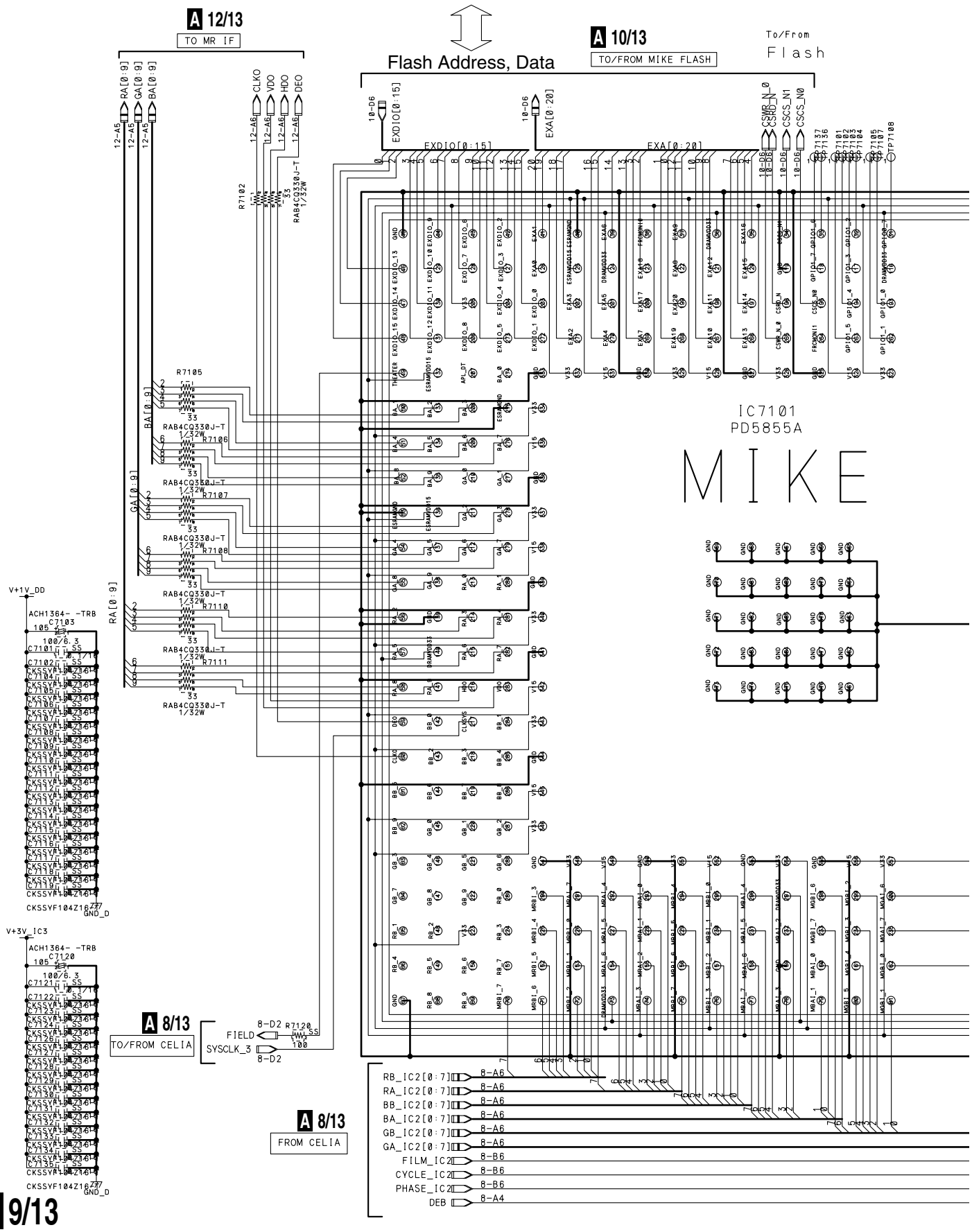

IC7004
PE5362A
CELIA
I/P
TO MIKE
A 9/13
A 1/13-7/13, 9/13, 11/13-13/13
A 2/13, 3/13, 9/13, 13/13
A 2/13, 3/13, 13/13
A 13/13
A 4/13
A 2/13, 4/13, 7/13
A 2/13, 4/13, 7/13, 11/13
FROM REG IO
FROM MIKE
FROM AD MAIN
TO AD MAIN
FROM MICHAEL MAIN, AD MAIN, ROZ
GA MAIN[0:7]
GA_MAIN[0:7]
MAIN_UCOM[1:176]

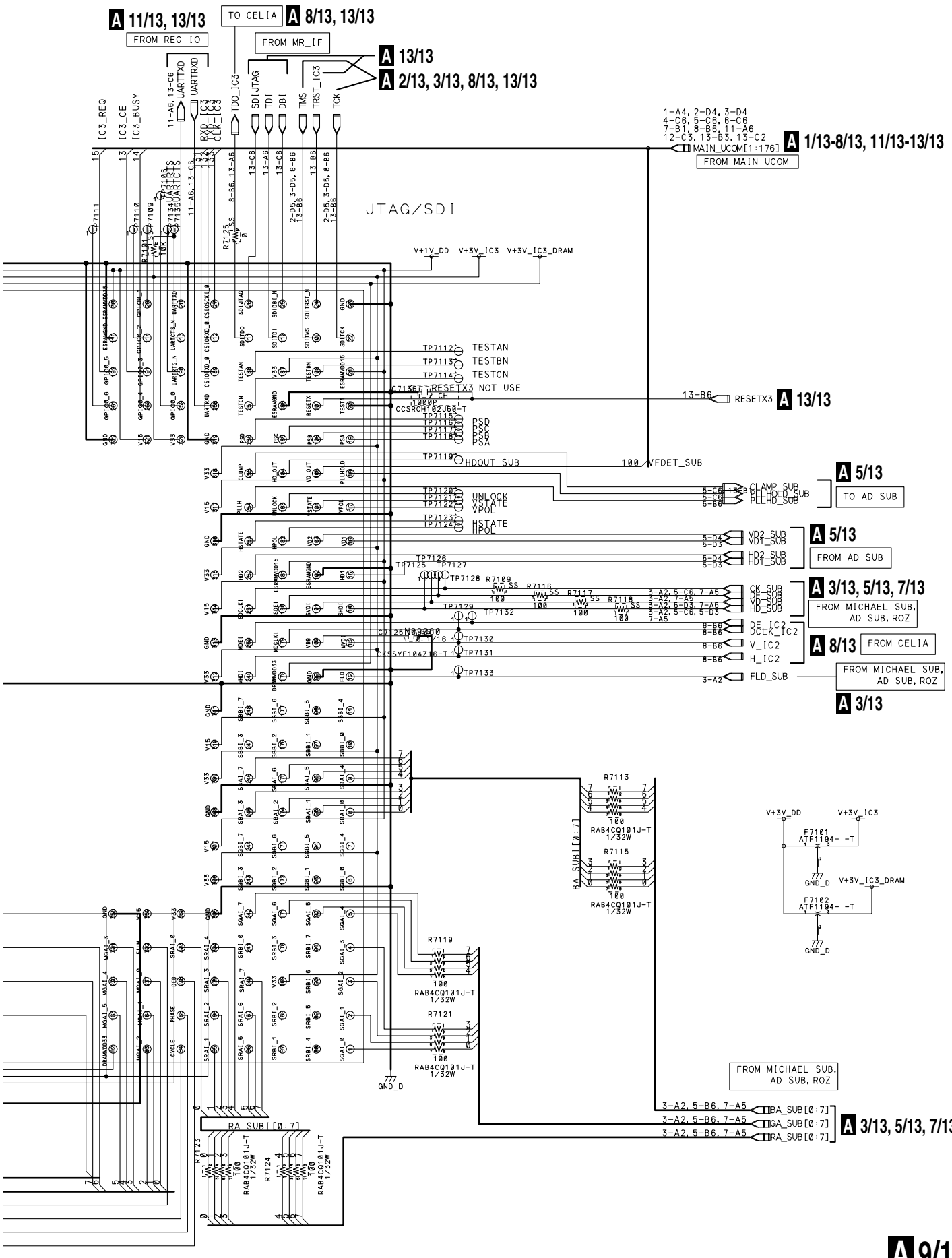
A 8/13

3.11 MR MAIN BOARD ASSY (9/13)

A 9/13 MR MAIN BOARD ASSY (AWV2028)

● **MIKE BLOCK**

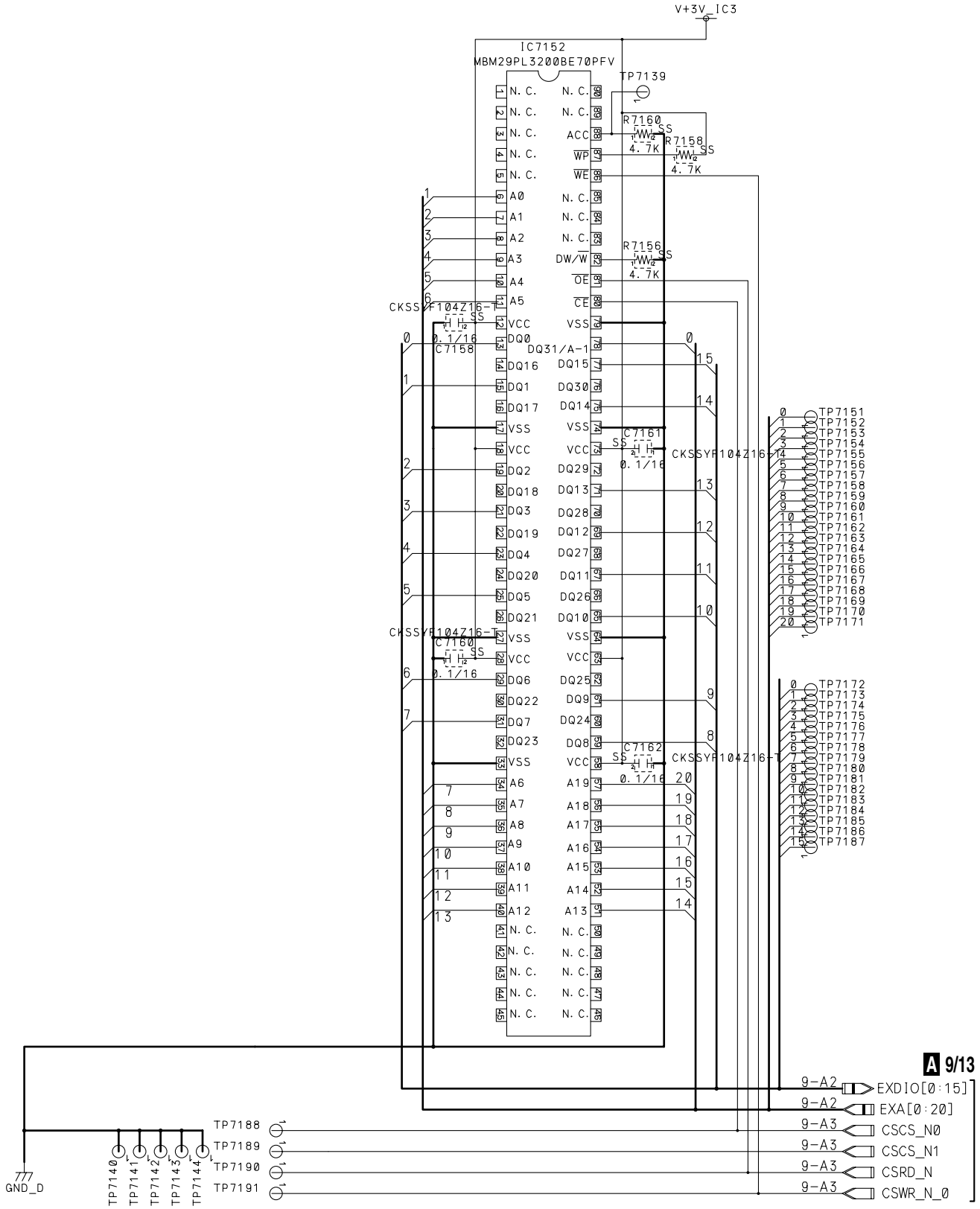



A 11/13, 13/13
FROM REG IO
TO CELIA
A 8/13, 13/13
FROM MR_IF
A 13/13
A 2/13, 3/13, 8/13, 13/13
JTAG/SDI
1-A4, 2-D4, 3-D4
4-C6, 5-C6, 6-C6
7-B1, 8-B6, 11-A6
12-C3, 13-B3, 13-C2
MAIN_UCOM[1:176]
A 1/13-8/13, 11/13-13/13
FROM MAIN UCOM
RESETX3 NOT USE
13-B6
RESETX3
A 13/13
HDOUT_SUB
VFDET_SUB
CLAMP_SUB
PLLHOLD_SUB
PLLHD_SUB
A 5/13
TO AD SUB
VD2_SUB
VD1_SUB
HD2_SUB
HD1_SUB
A 5/13
FROM AD SUB
CK_SUB
VD_SUB
HD_SUB
A 3/13, 5/13, 7/13
FROM MICHAEL SUB, AD SUB, ROZ
DE_IC2
DCLK_IC2
V_IC2
H_IC2
A 8/13
FROM CELIA
FLD_SUB
FROM MICHAEL SUB, AD SUB, ROZ
A 3/13
BA_SUB[0:7]
GA_SUB[0:7]
RA_SUB[0:7]
A 3/13, 5/13, 7/13
FROM MICHAEL SUB, AD SUB, ROZ
A 9/13

3.12 MR MAIN BOARD ASSY (10/13)

A 10/13 MR MAIN BOARD ASSY (AWV2028)

● **MIKE FLASH BLOCK**



A 10/13

A

B

C

D

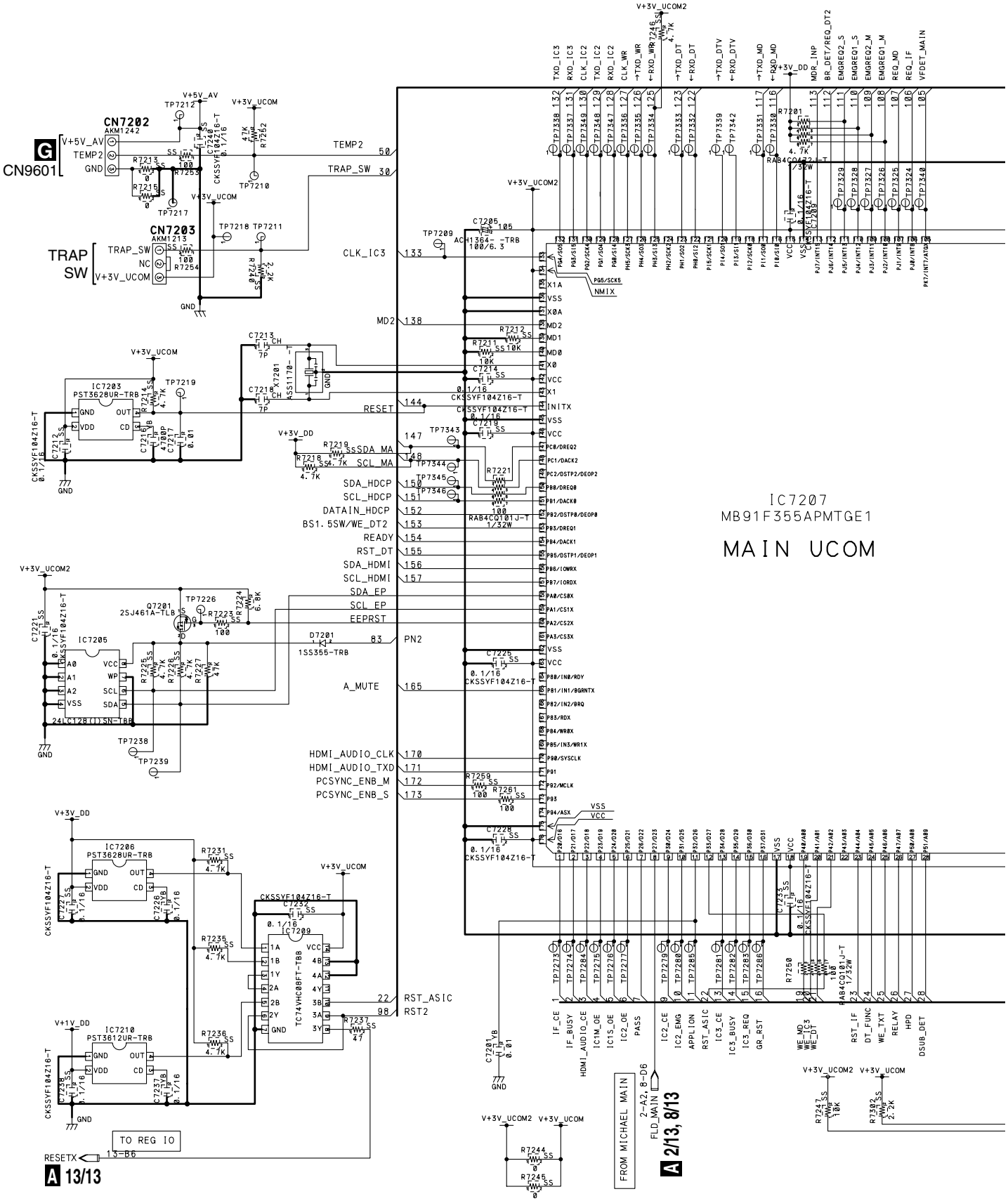
E

F

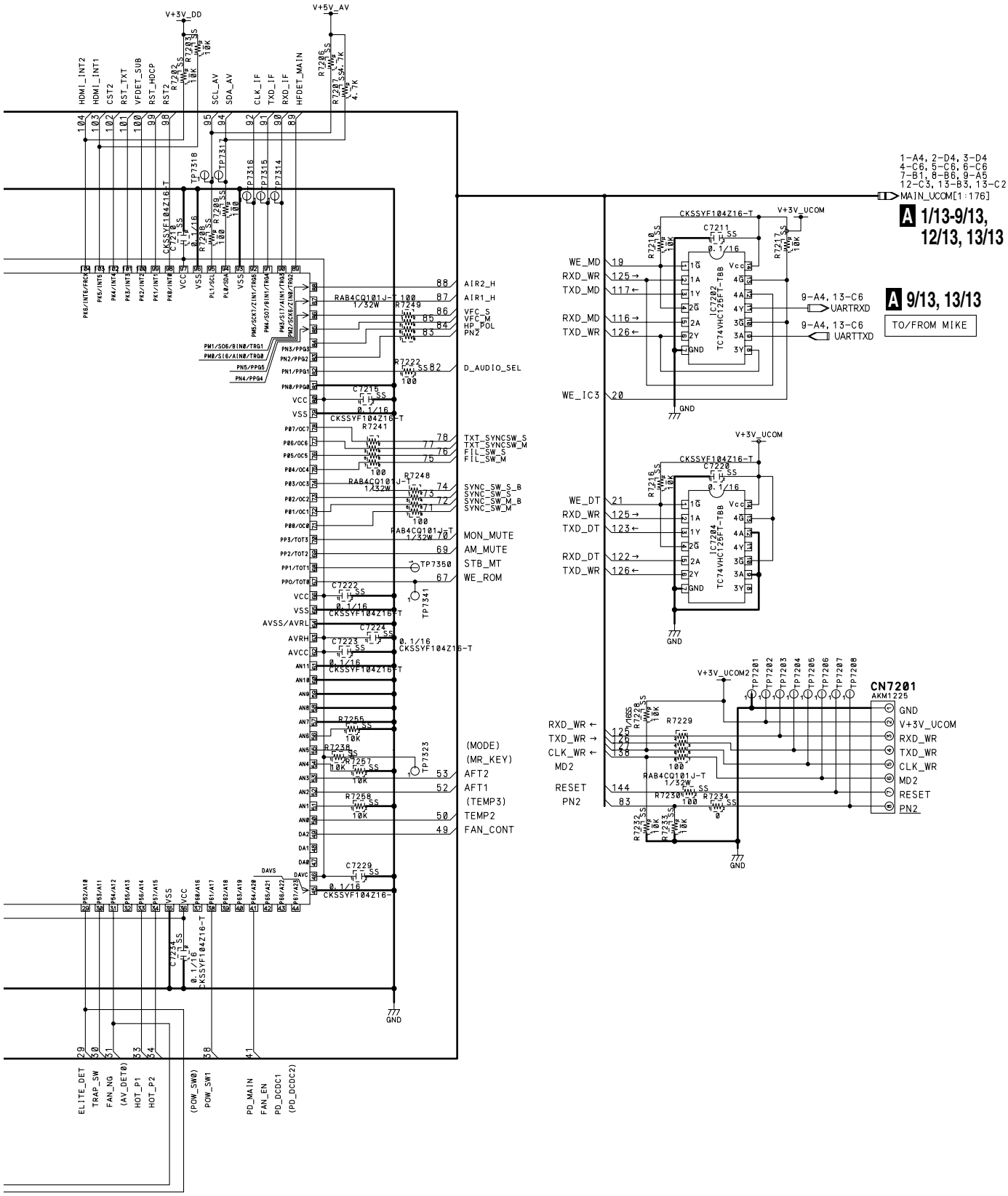
3.13 MR MAIN BOARD ASSY (11/13)

A 11/13 MR MAIN BOARD ASSY (AWV2028)

● **MAIN UCOM BLOCK**



A 11/13

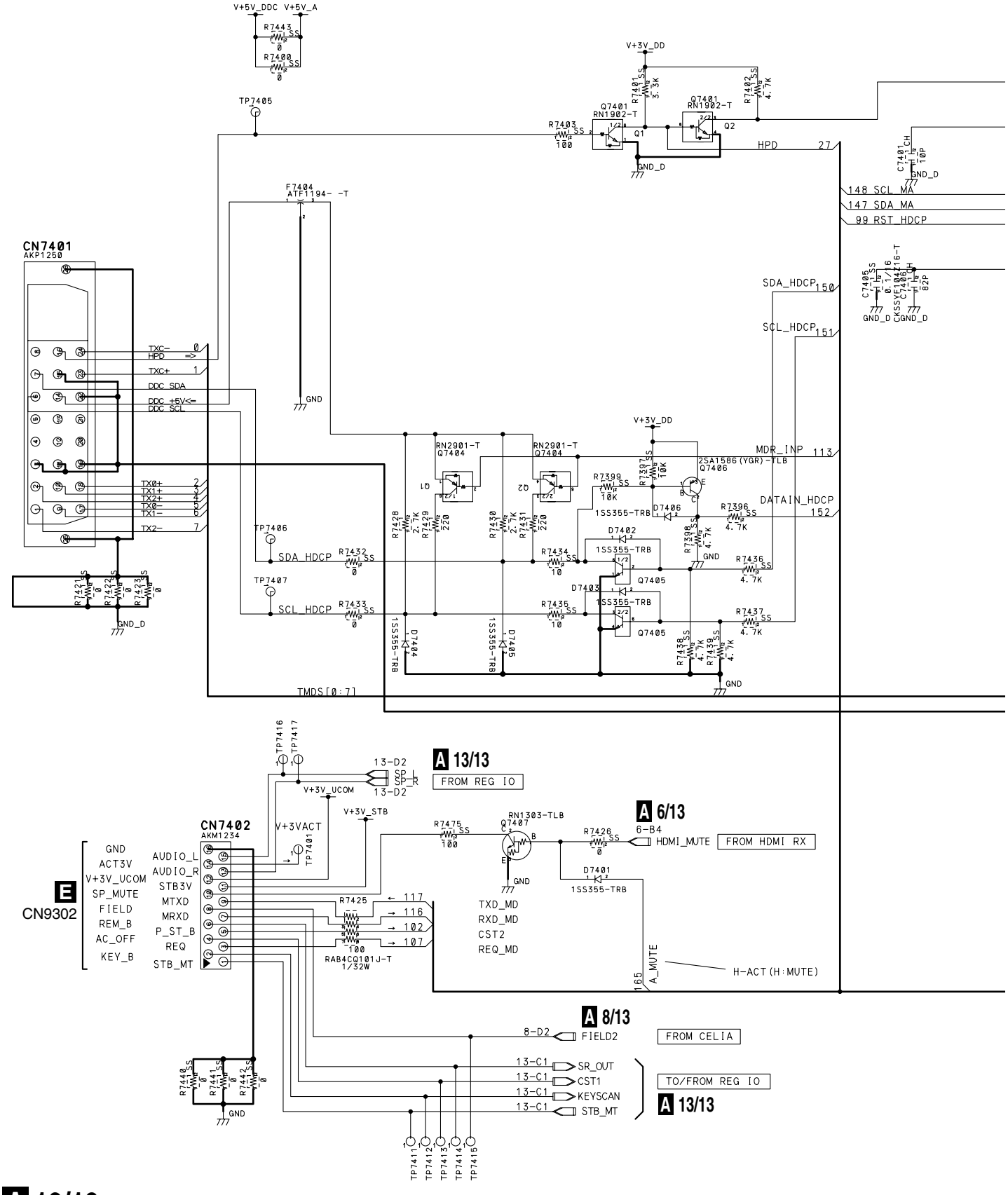

V+3V_DD
V+5V_AV
HDMI_INT2
HDMI_INT1
CST2
RST_TXT
VFDET_SUB
RST_HDCP
RST2
SCL_AV
SDA_AV
CLK_IF
TXD_IF
RXD_IF
HFDET_MAIN
1-A4, 2-D4, 3-D4
4-C6, 5-C6, 6-C6
7-B1, 8-B6, 9-A5
12-C3, 13-B3, 13-C2
MAIN_UCOM[1:176]
A 1/13-9/13, 12/13, 13/13
A 9/13, 13/13
TO/FROM MIKE
9-A4, 13-C6 UARTRXD
9-A4, 13-C6 UARTTXD
V+3V_UCOM
V+3V_UCOM2
AIR2_H
AIR1_H
VFC_S
VFC_M
HP_POL
PN2
D_AUDIO_SEL
TXT_SYNCSW_S
TXT_SYNCSW_M
FIL_SW_S
FIL_SW_M
SYNC_SW_S_B
SYNC_SW_S
SYNC_SW_M_B
SYNC_SW_M
MON_MUTE
AM_MUTE
STB_MT
WE_ROM
(MODE)
(MR_KEY)
AFT2
AFT1
(TEMP3)
TEMP2
FAN_CONT
ELITE_DET
TRAP_SW
FAN_NG
(AV_DET0)
HOT_P1
HOT_P2
(POW_SW0)
POW_SW1
PD_MAIN
FAN_EN
PD_DCDC1
(PD_DCDC2)
WE_MD
RXD_WR
TXD_MD
RXD_MD
TXD_WR
WE_IC3
WE_DT
RXD_DT
TXD_DT
CLK_WR
MD2
RESET
PN2
CN7201
AKM1225
GND
V+3V_UCOM
RXD_WR
TXD_WR
CLK_WR
MD2
RESET
PN2
IC7202
IC7204
TC74VHC125FT-TBB
CKSSYF104Z16-T
RAB4CQ101J-T 1/32W
GND

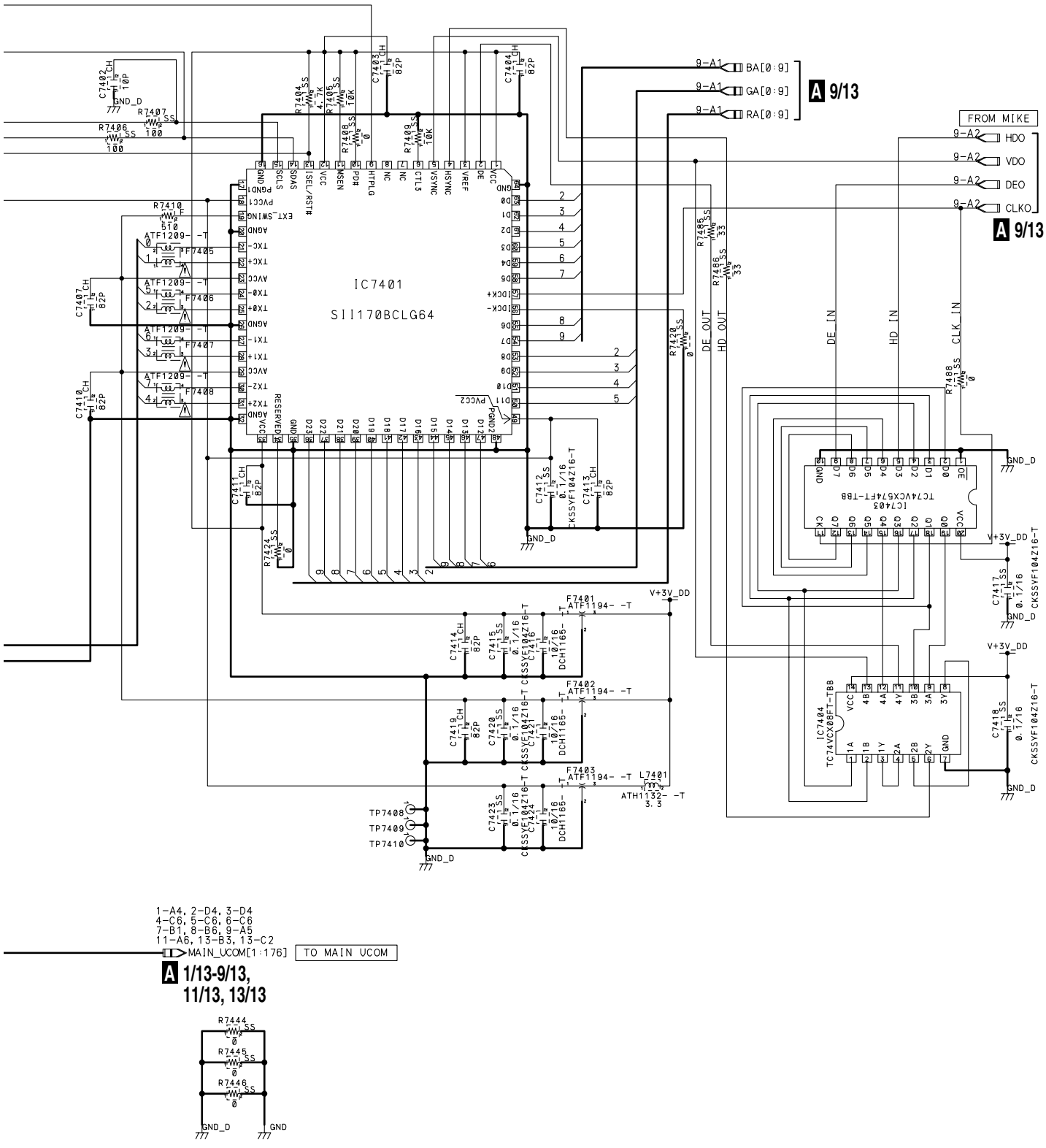
A 11/13

3.14 MR MAIN BOARD ASSY (12/13)

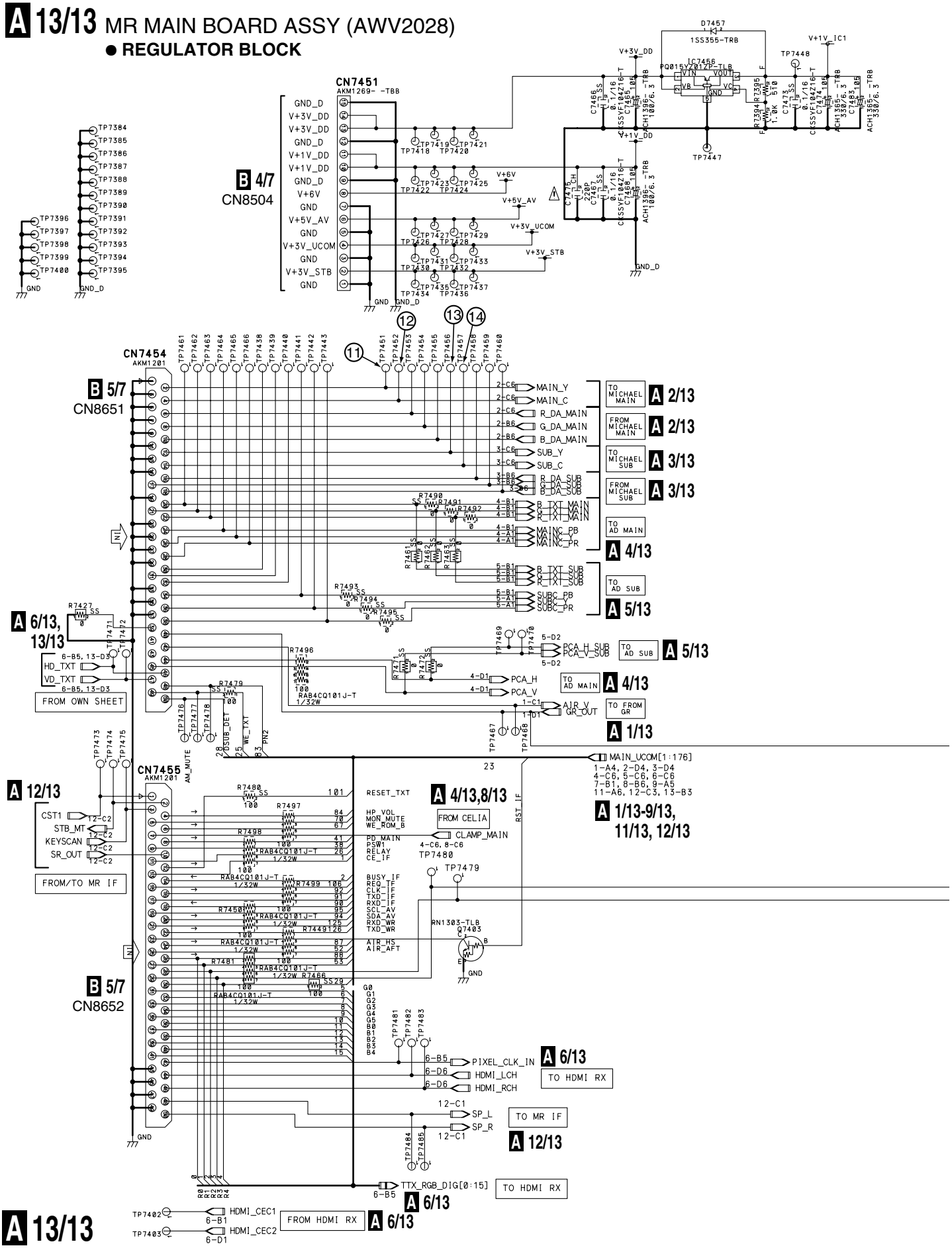
A 12/13 MR MAIN BOARD ASSY (AWV2028)

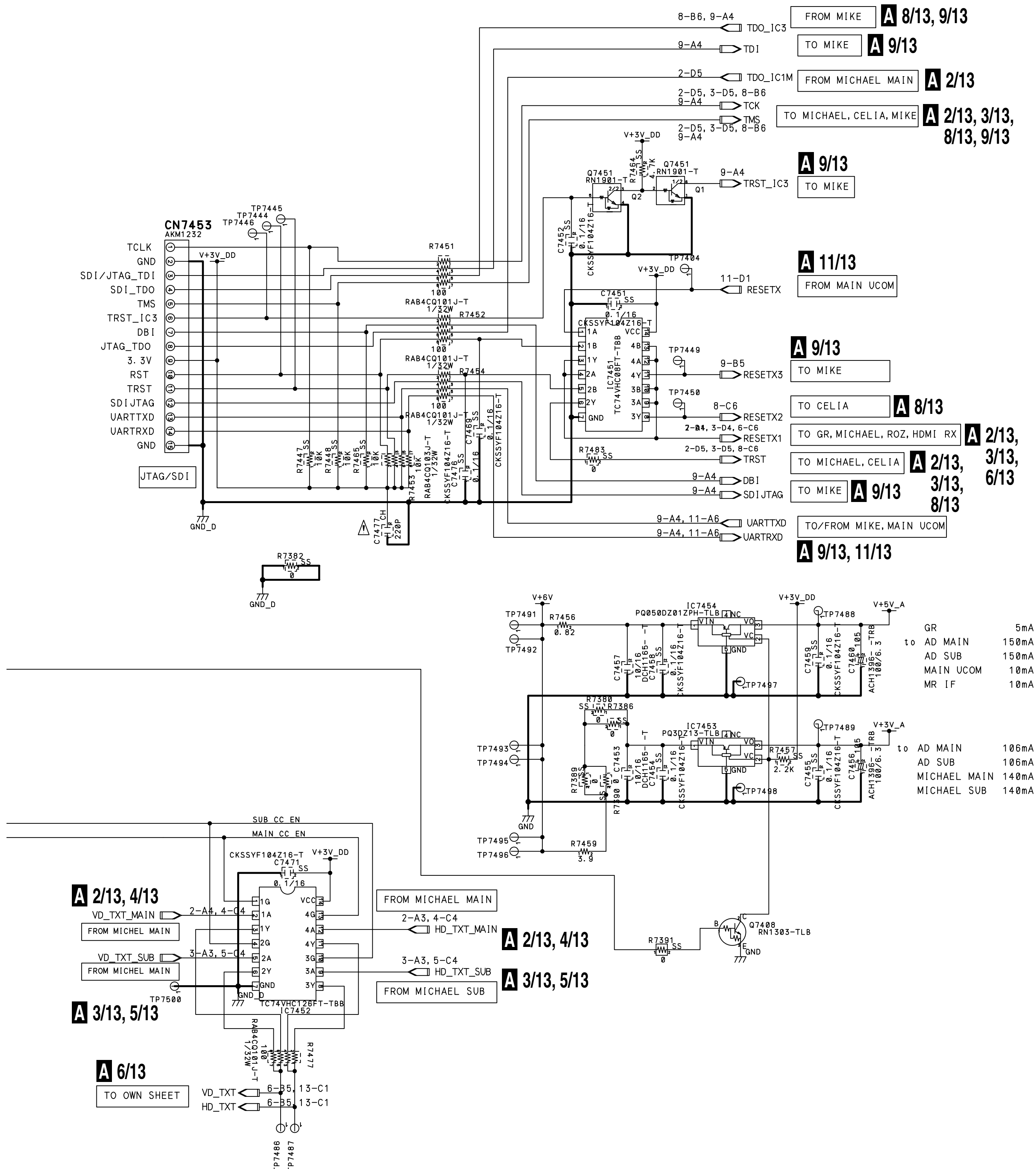
● **MR I/F BLOCK**




IC7401
SII170BCLG64
9-A1 BA[0:9]
9-A1 GA[0:9]
9-A1 RA[0:9]
A 9/13
FROM MIKE
9-A2 HDO
9-A2 VDO
9-A2 DEO
9-A2 CLKO
A 9/13
DE_IN
HD_IN
CLK_IN
DE_OUT
HD_OUT
IC7403
TC74VCX574FT-TBB
IC7404
TC74VCX00FT-TBB
V+3V_DD
GND_D
1-A4, 2-D4, 3-D4
4-C6, 5-C6, 6-C6
7-B1, 8-B6, 9-A5
11-A6, 13-B3, 13-C2
MAIN_UCOM[1:176]
TO MAIN UCOM
A 1/13-9/13, 11/13, 13/13
GND
A 12/13

3.15 MR MAIN BOARD ASSY (13/13)





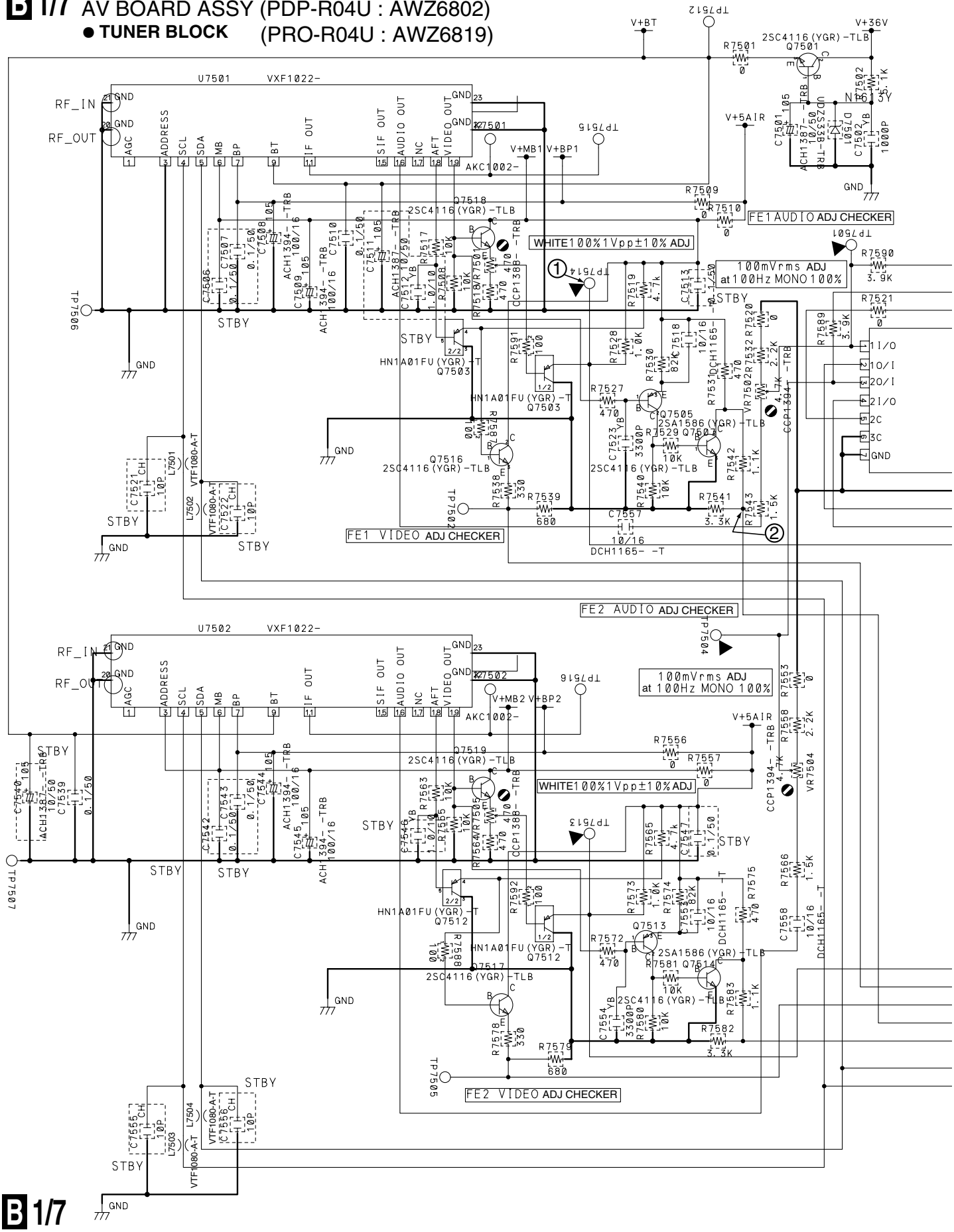
FROM MIKE
A 8/13, 9/13
TDO_IC3
TO MIKE
A 9/13
TDI
FROM MICHAEL MAIN
A 2/13
TDO_IC1M
TCK
TMS
TO MICHAEL, CELIA, MIKE
A 2/13, 3/13, 8/13, 9/13
Q7451
RN1901-T
TRST_IC3
A 9/13
TO MIKE
CN7453
AKM1232
TCLK
GND
SDI/JTAG_TDI
SDI_TDO
TMS
TRST_IC3
DBI
JTAG_TDO
3.3V
RST
TRST
SDIJTAG
UARTTXD
UARTRXD
GND
JTAG/SDI
GND_D
R7451
RAB4CQ101J-T
1/32W
R7452
R7454
A 11/13
FROM MAIN UCOM
RESETX
IC7451
TC74VHC08FT-TBB
A 9/13
TO MIKE
RESETX3
TO CELIA
A 8/13
RESETX2
TO GR, MICHAEL, ROZ, HDMI RX
A 2/13, 3/13, 6/13
RESETX1
TO MICHAEL, CELIA
A 2/13, 3/13, 8/13
TRST
TO MIKE
A 9/13
DBI
SDIJTAG
TO/FROM MIKE, MAIN UCOM
UARTTXD
UARTRXD
A 9/13, 11/13
R7382
IC7454
PQ050DZ01ZPH-TLB
V+6V
V+3V_DD
V+5V_A
GR 5mA
to AD MAIN 150mA
AD SUB 150mA
MAIN UCOM 10mA
MR IF 10mA
IC7453
PQ3DZ13-TLB
V+3V_A
to AD MAIN 106mA
AD SUB 106mA
MICHAEL MAIN 140mA
MICHAEL SUB 140mA
SUB CC EN
MAIN CC EN
A 2/13, 4/13
VD_TXT_MAIN
FROM MICHEL MAIN
VD_TXT_SUB
FROM MICHEL MAIN
A 3/13, 5/13
FROM MICHAEL MAIN
HD_TXT_MAIN
A 2/13, 4/13
HD_TXT_SUB
FROM MICHAEL SUB
A 3/13, 5/13
TC74VHC126FT-TBB
IC7452
Q7408
RN1303-TLB
A 6/13
TO OWN SHEET
VD_TXT
HD_TXT

A 13/13

3.16 AV BOARD ASSY (1/7)

B 1/7 AV BOARD ASSY (PDP-R04U : AWZ6802)

● **TUNER BLOCK** (PRO-R04U : AWZ6819)



	USED	VACANT (AWZ6802)	VACANT (AWZ6819)
R	7501-7592	7515-7516, 7561-7562	7515-7516, 7561-7562
C	7501-7558	7505, 7525, 7541	7505, 7525, 7541
Q	7501-7519		
D	7501		
U	7501-7502		
IC	7501-7503		

AIR_L /AIR_R
(DC) 3.4V
(AMPLITUDE) 490±50mVrms
(OUTPUT) NPN

AIR_SW	L	H
	FE1	FE2

MODE_1	MODE_0	MODE
L	L	SAP
L	H	BOTH
H	L	STEREO
H	H	STEREO

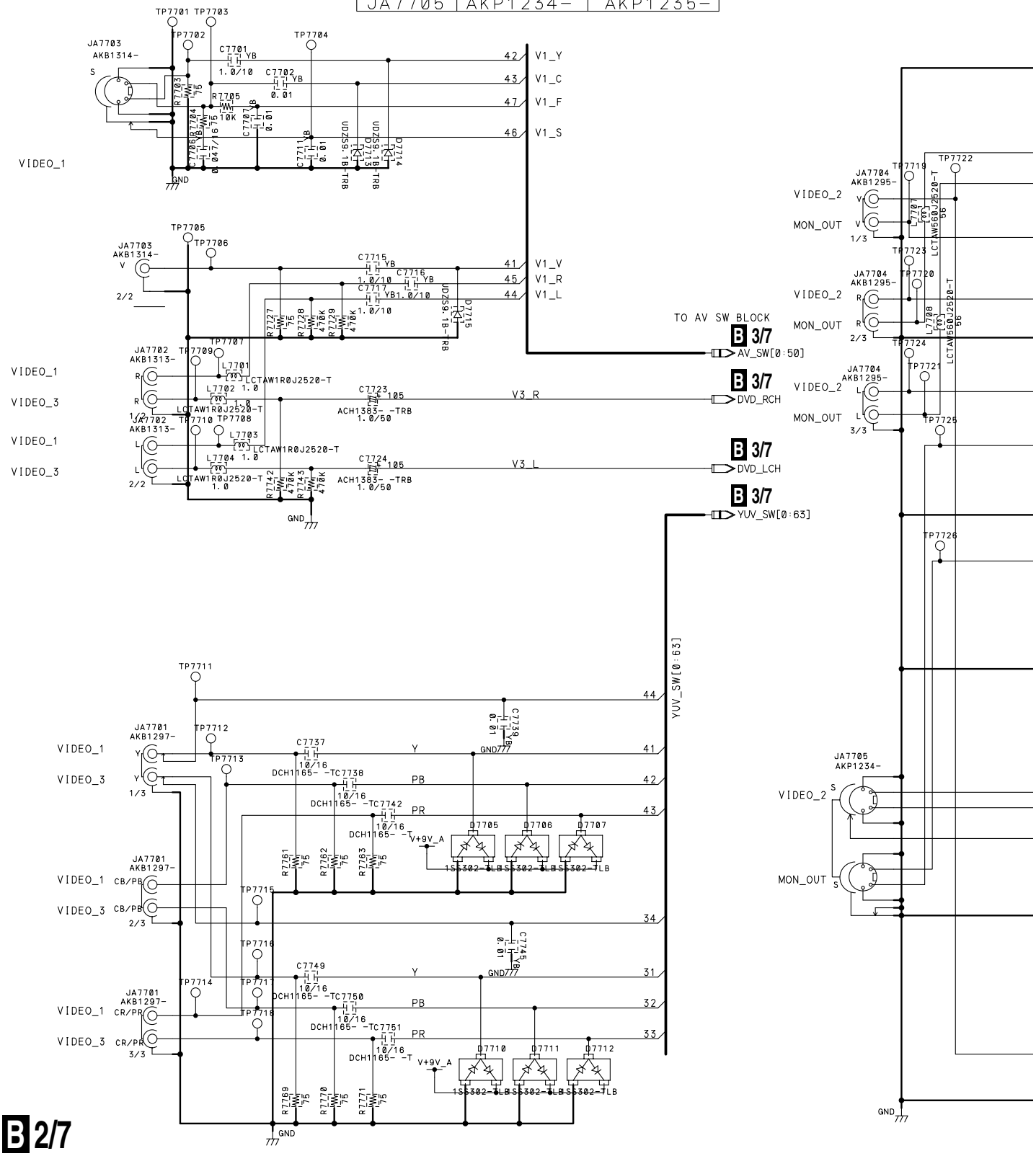
FOMO_1	FOMO_0	MODE
L	L	STID_H
L	H	STID_L
H	L	STID_L
H	H	STID_L

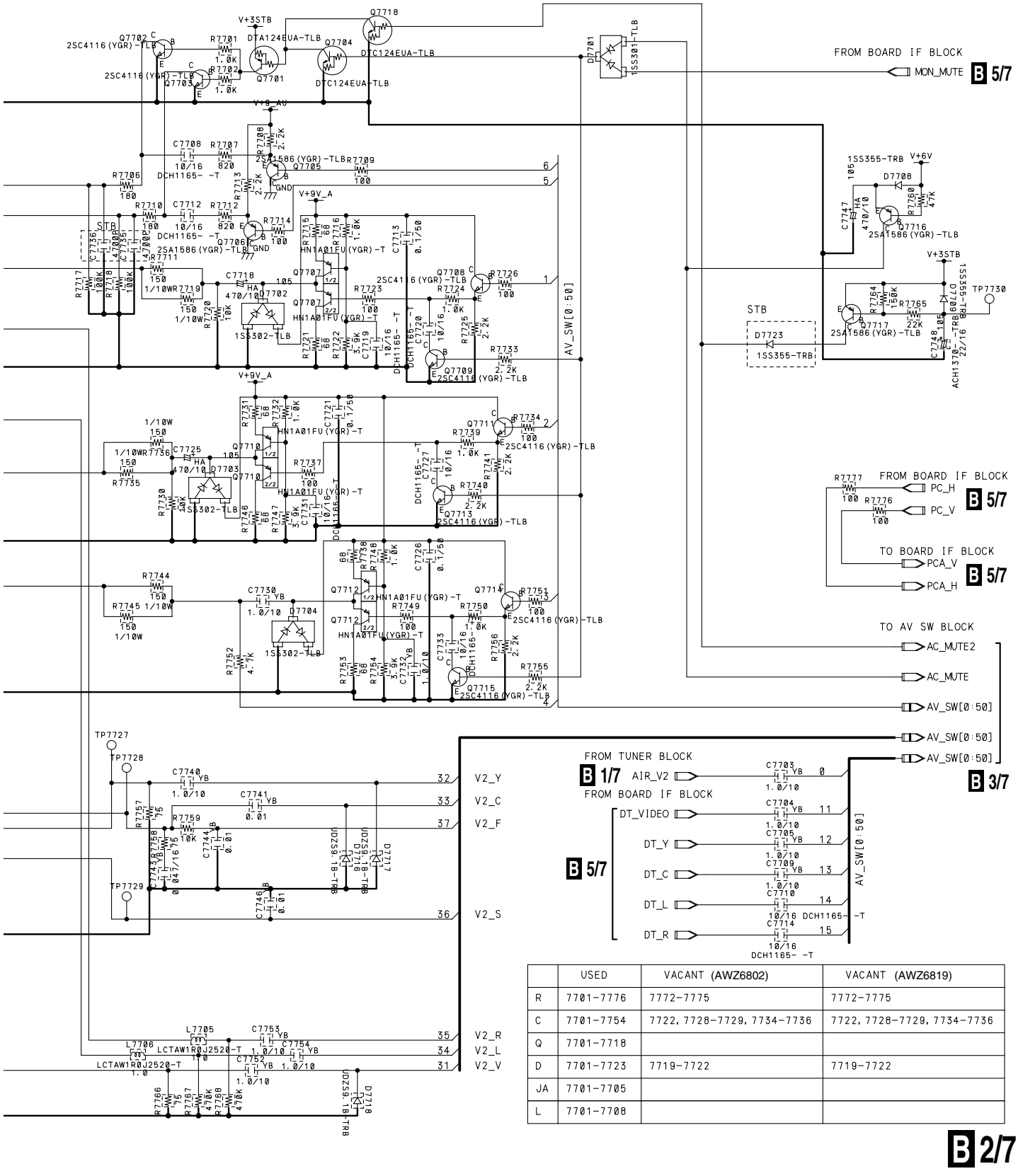
3.17 AV BOARD ASSY (2/7)

B 2/7 AV BOARD ASSY (PDP-R04U : AWZ6802) (PRO-R04U : AWZ6819)

● **AV IO BLOCK**

	(AWZ6802)	(AWZ6819)
JA7701	AKB1297-	AKB1298-
JA7702	AKB1313-	AKB1302-
JA7703	AKB1314-	AKB1309-
JA7704	AKB1295-	AKB1312-
JA7705	AKP1234-	AKP1235-





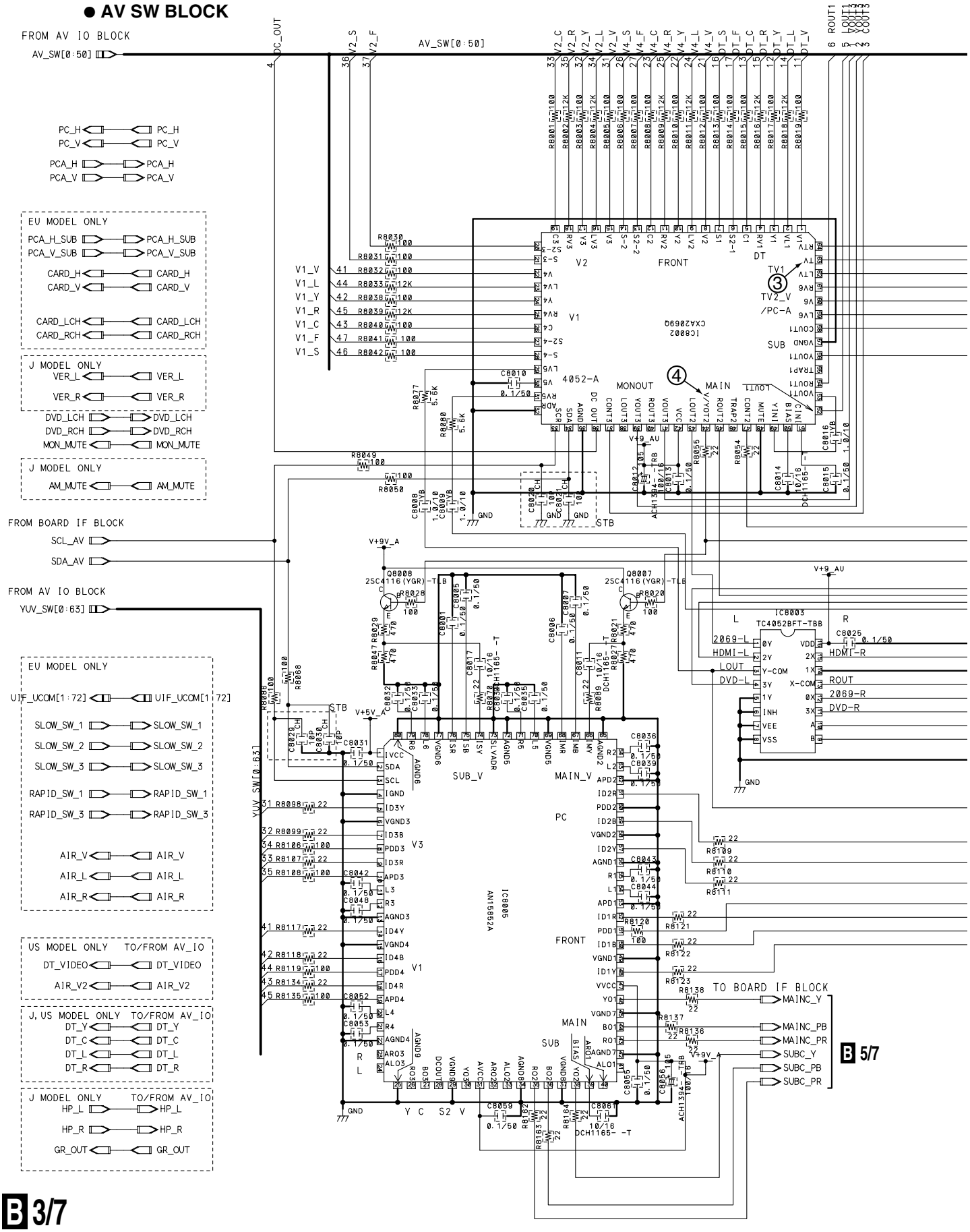
	USED	VACANT (AWZ6802)	VACANT (AWZ6819)
R	7701-7776	7772-7775	7772-7775
C	7701-7754	7722, 7728-7729, 7734-7736	7722, 7728-7729, 7734-7736
Q	7701-7718		
D	7701-7723	7719-7722	7719-7722
JA	7701-7705		
L	7701-7708		

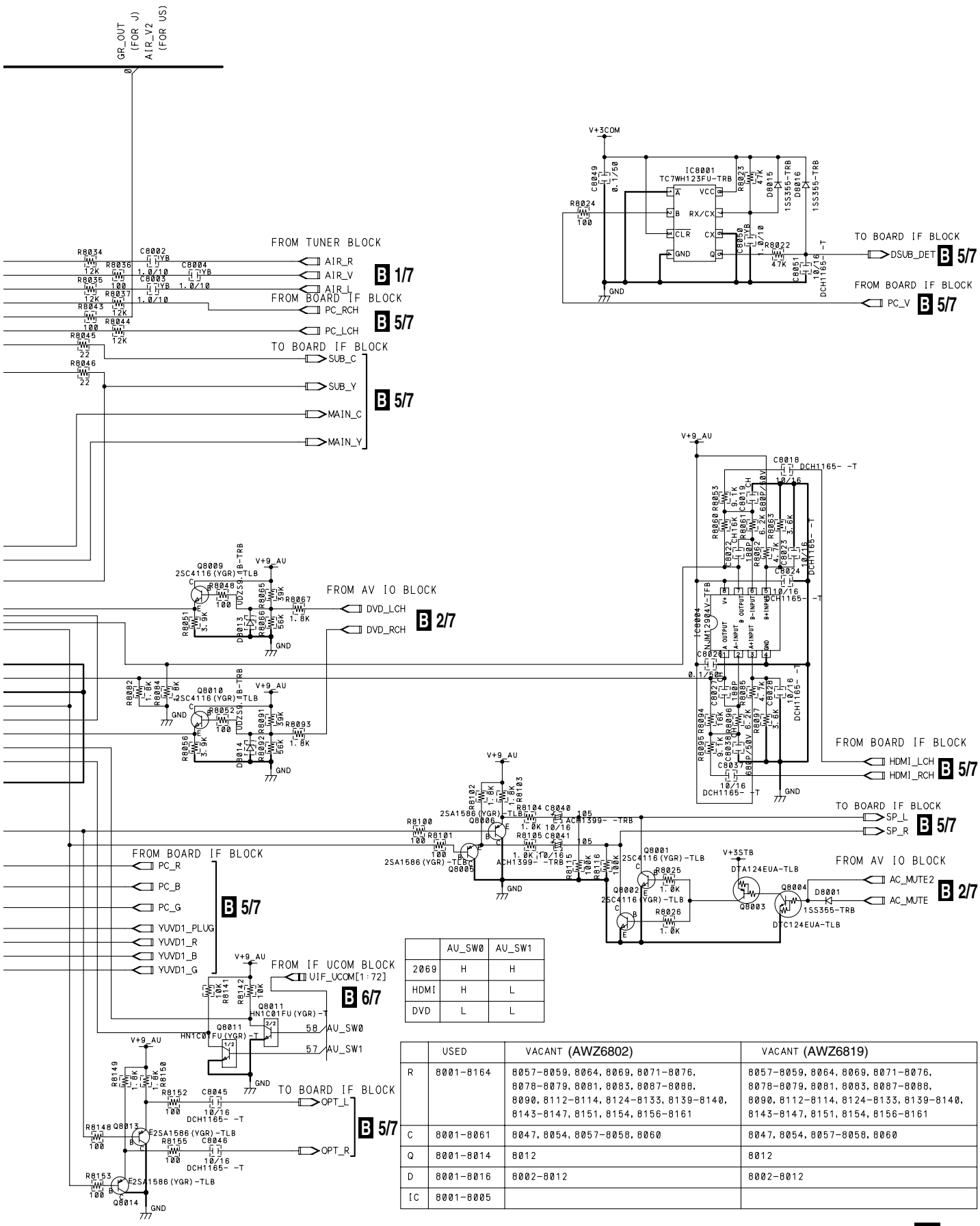
B 2/7

3.18 AV BOARD ASSY (3/7)

B 3/7 AV BOARD ASSY (PDP-R04U : AWZ6802) (PRO-R04U : AWZ6819)

● **AV SW BLOCK**





	AU_SW0	AU_SW1
2069	H	H
HDMI	H	L
DVD	L	L

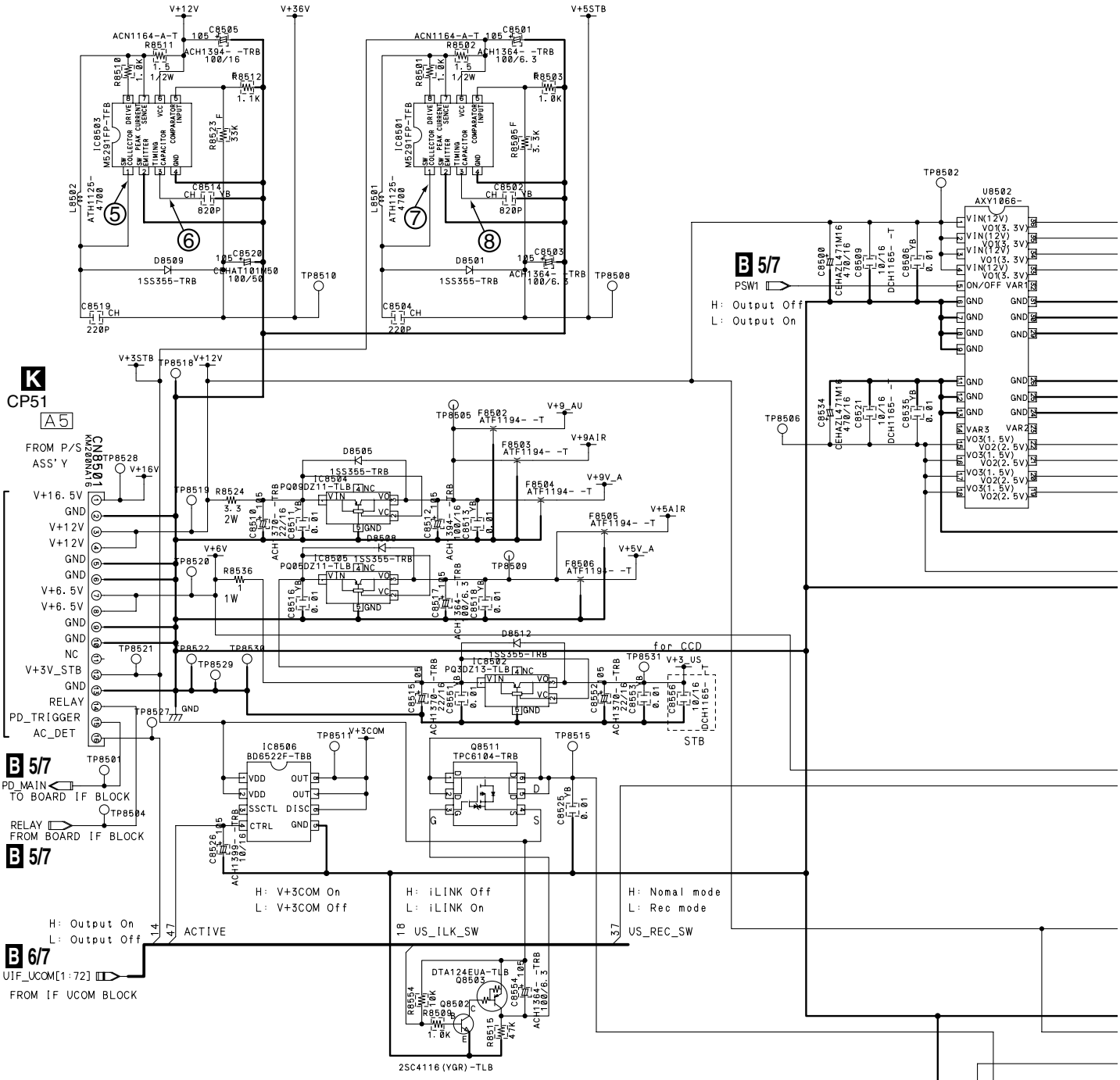
	USED	VACANT (AWZ6802)	VACANT (AWZ6819)
R	8001-8164	8057-8059, 8064, 8069, 8071-8076, 8078-8079, 8081, 8083, 8087-8088, 8090, 8112-8114, 8124-8133, 8139-8140, 8143-8147, 8151, 8154, 8156-8161	8057-8059, 8064, 8069, 8071-8076, 8078-8079, 8081, 8083, 8087-8088, 8090, 8112-8114, 8124-8133, 8139-8140, 8143-8147, 8151, 8154, 8156-8161
C	8001-8061	8047, 8054, 8057-8058, 8060	8047, 8054, 8057-8058, 8060
Q	8001-8014	8012	8012
D	8001-8016	8002-8012	8002-8012
IC	8001-8005		

B 3/7

3.19 AV BOARD ASSY (4/7)

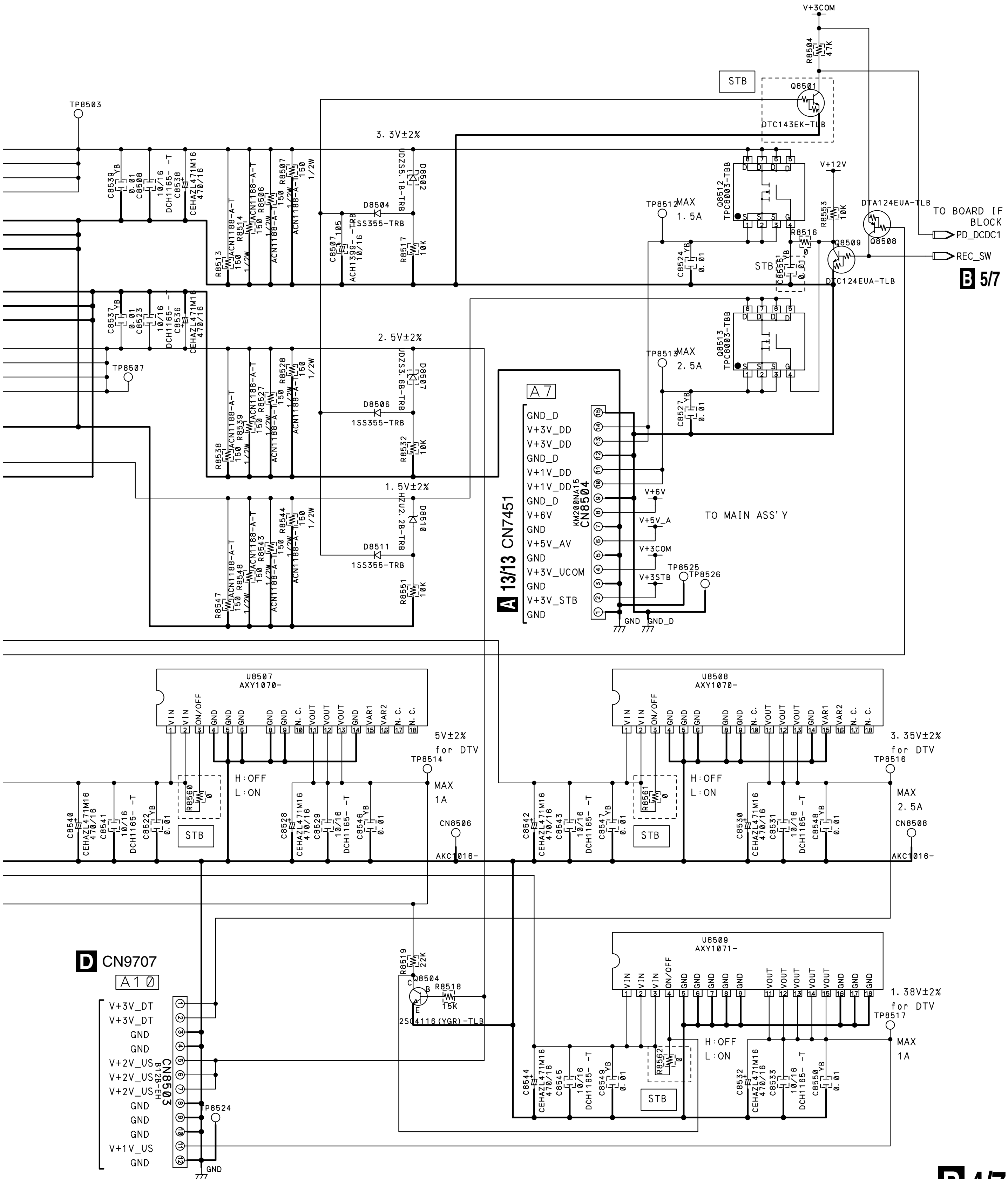
B 4/7 AV BOARD ASSY (PDP-R04U : AWZ6802) (PRO-R04U : AWZ6819)

● AV REG BLOCK



	USED	VACANT (AWZ6802)	VACANT (AWZ6819)
R	8501-8562	8520-8522, 8525-8526, 8529-8531, 8533-8535, 8537, 8540-8542, 8545-8546, 8550-8552, 8555-8559	8520-8522, 8525-8526, 8529-8531, 8533-8535, 8537, 8540-8542, 8545-8546, 8550-8552, 8555-8559
C	8500-8556		
Q	8501-8513	8505-8507, 8510	8505-8507, 8510
D	8501-8512		
U	8502-8510	8501, 8503-8506	8501, 8503-8506
IC	8501-8506		
CN	8501-8508	8505, 8507	8505, 8507

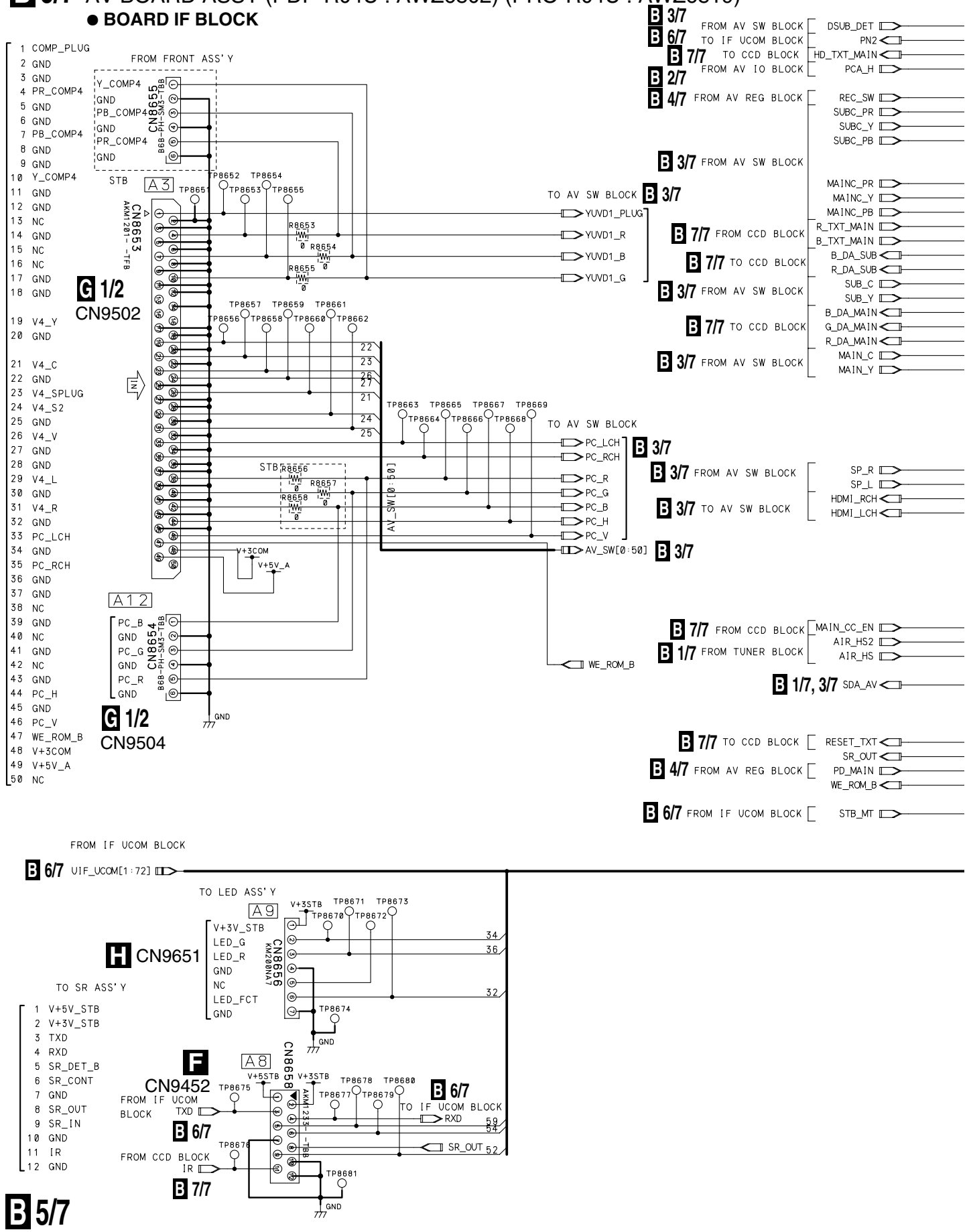
B 4/7

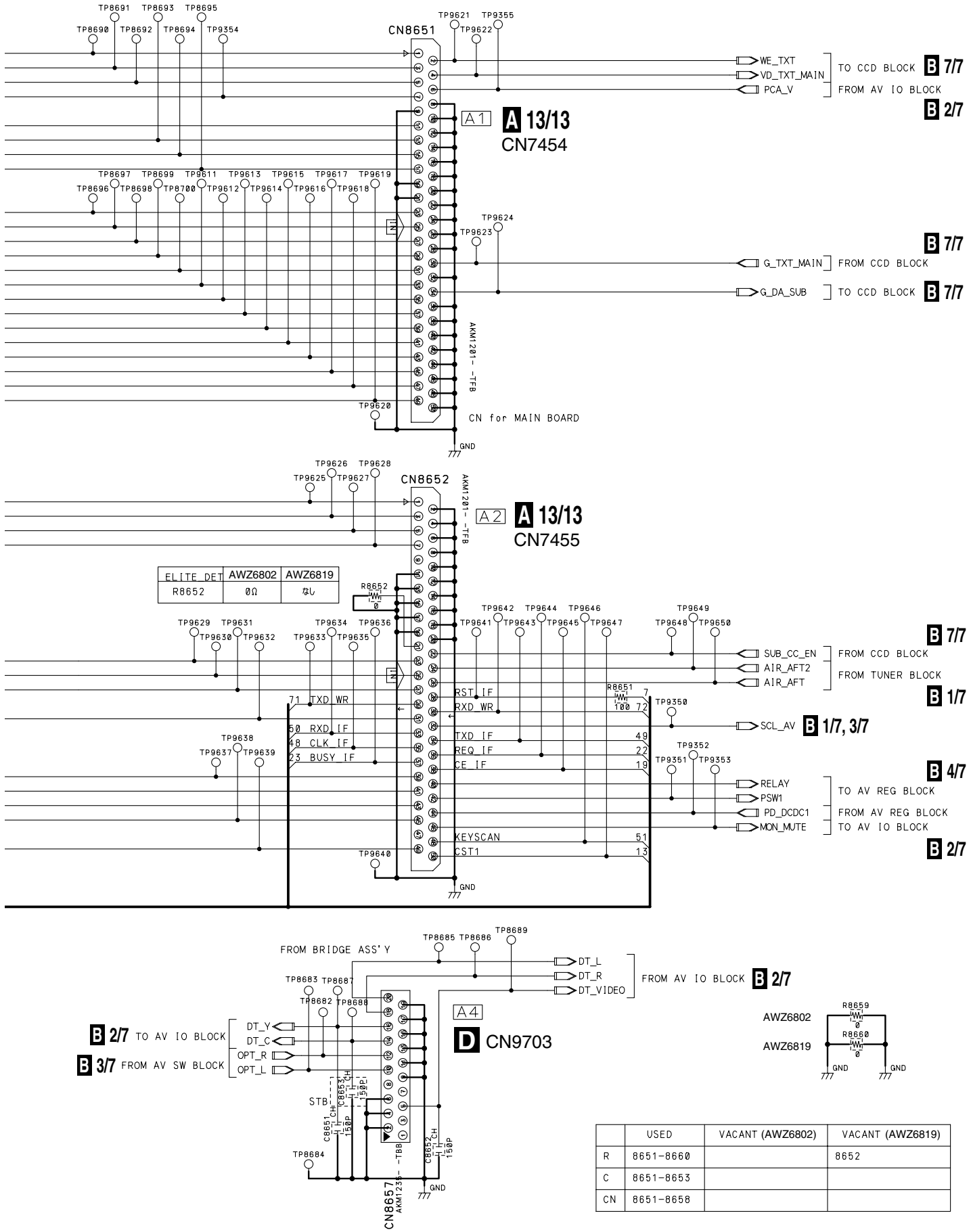

V+3COM
R8504 47K
STB
Q8501
DTC143EK-TLB
TP8503
3.3V±2%
UDZS5.1B-TRB D8502
D8504 1SS355-TRB
Q8512 TPC8003-TBB
V+12V
TP8512 MAX 1.5A
R8516
R8553 10K
DTA124EUA-TLB Q8508
Q8509
DTC124EUA-TLB
TO BOARD IF BLOCK
PD_DCDC1
REC_SW
B 5/7
Q8513 TPC8003-TBB
TP8513 MAX 2.5A
2.5V±2%
UDZS3.6B-TRB D8507
D8506 1SS355-TRB
TP8507
1.5V±2%
HZU2.2B-TRB D8510
D8511 1SS355-TRB
A 13/13 CN7451
A7
KM200NA15
CN8504
GND_D
V+3V_DD
V+3V_DD
GND_D
V+1V_DD
V+1V_DD
GND_D
V+6V
GND
V+5V_AV
GND
V+3V_UCOM
GND
V+3V_STB
GND
TO MAIN ASS'Y
V+6V
V+5V_A
V+3COM
V+3STB
TP8525
TP8526
GND GND_D
U8507 AXY1070-
VIN VIN ON/OFF GND GND GND GND GND N.C. VOUT VOUT VOUT GND VAR1 VAR2 N.C. N.C.
H:OFF
L:ON
5V±2% for DTV
TP8514
MAX 1A
CN8506
AKC1016-
U8508 AXY1070-
3.35V±2% for DTV
TP8516
MAX 2.5A
CN8508
AKC1016-
U8509 AXY1071-
1.38V±2% for DTV
TP8517
MAX 1A
D CN9707
A10
CN8503
B12B-EH
V+3V_DT
V+3V_DT
GND
GND
V+2V_US
V+2V_US
V+2V_US
GND
GND
GND
V+1V_US
GND
TP8524
GND
R8519 22K
Q8504
R8518 15K
2SC4116(YGR)-TLB
CEHAZL471M16 470/16
DCH1165- -T 10/16
ACN1188-A-T 150 1/2W

3.20 AV BOARD ASSY (5/7)

B 5/7 AV BOARD ASSY (PDP-R04U : AWZ6802) (PRO-R04U : AWZ6819)

● BOARD IF BLOCK





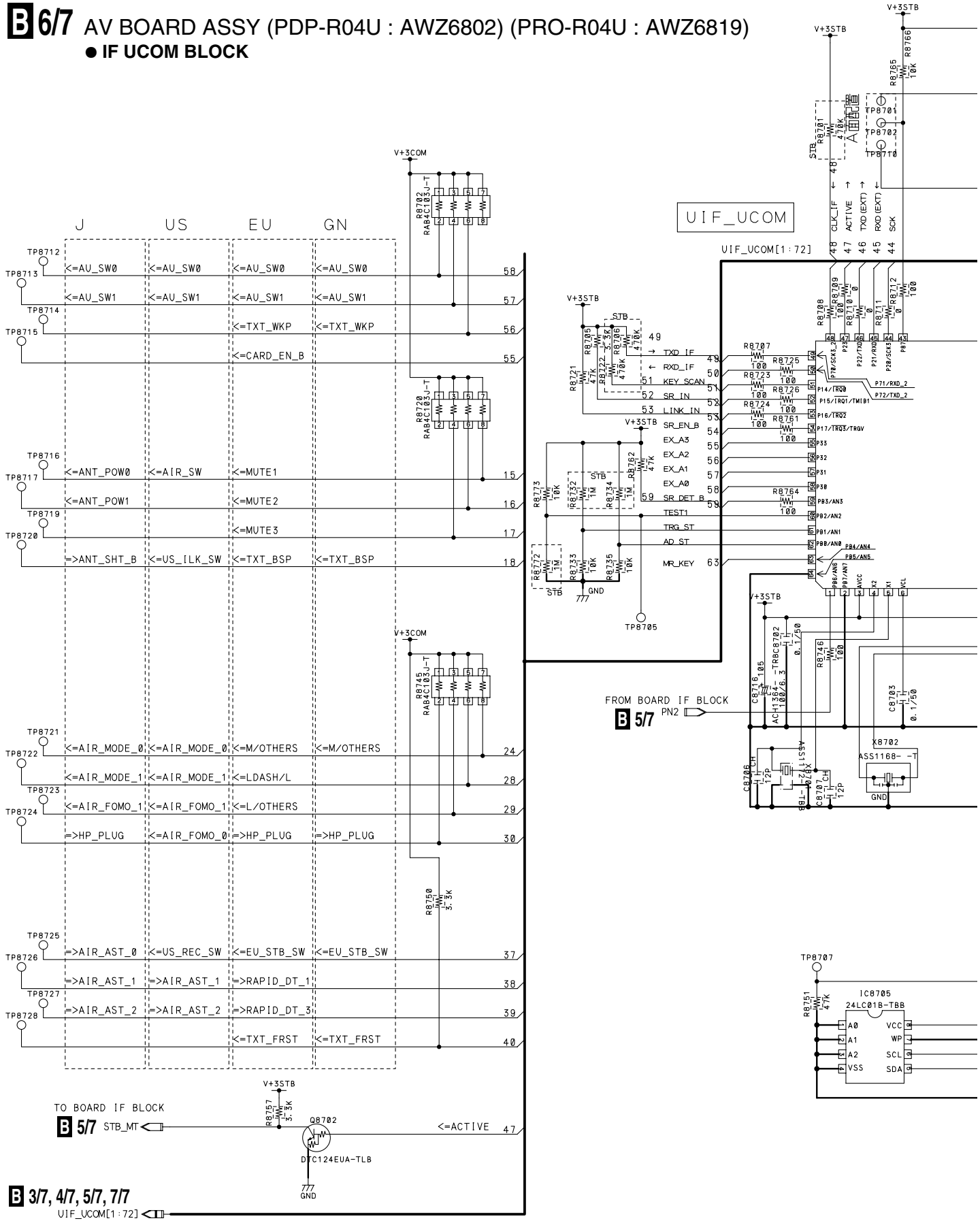
	USED	VACANT (AWZ6802)	VACANT (AWZ6819)
R	8651-8660		8652
C	8651-8653		
CN	8651-8658		

B 5/7

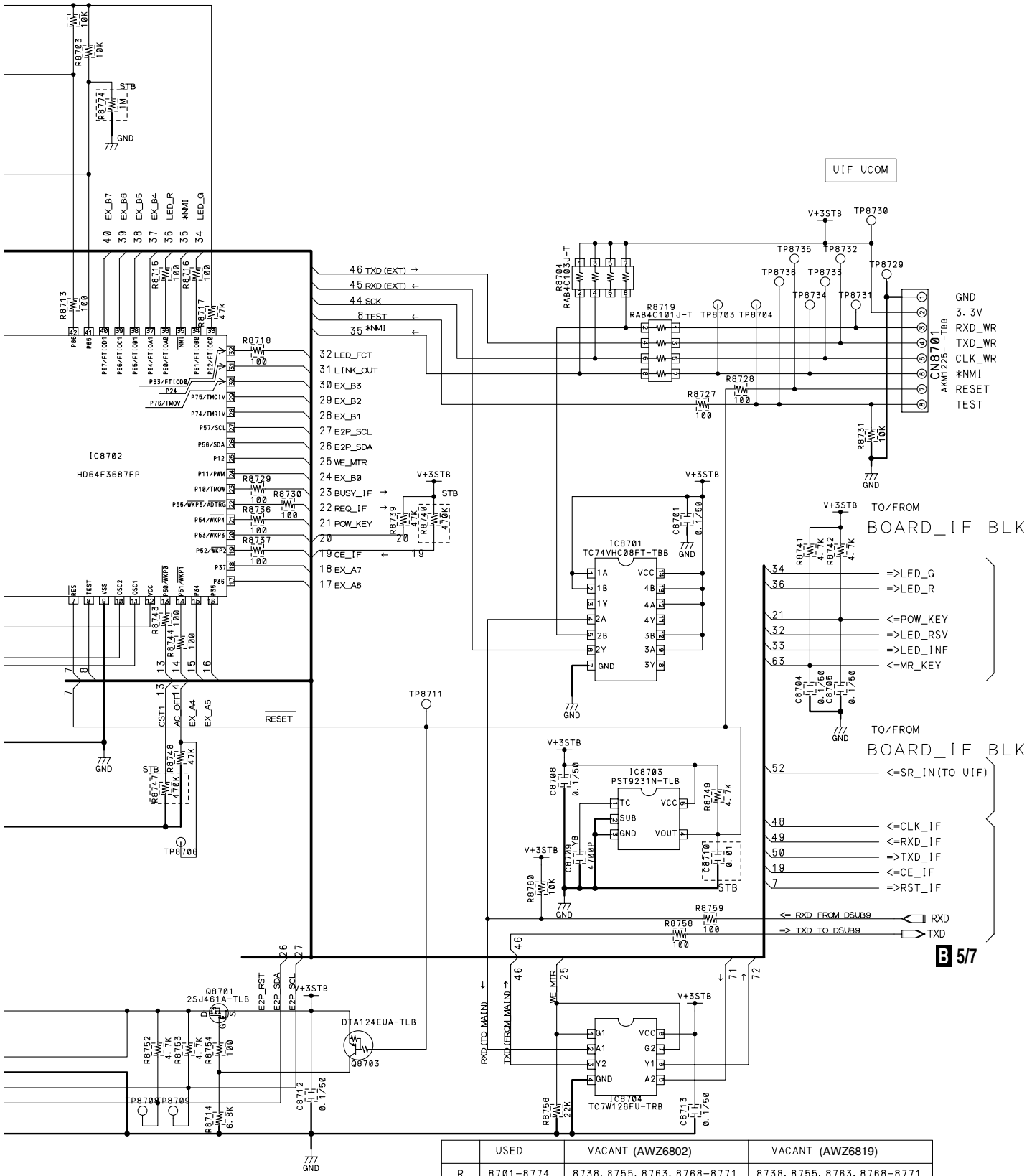
3.21 AV BOARD ASSY (6/7)

B 6/7 AV BOARD ASSY (PDP-R04U : AWZ6802) (PRO-R04U : AWZ6819)

● **IF UCOM BLOCK**

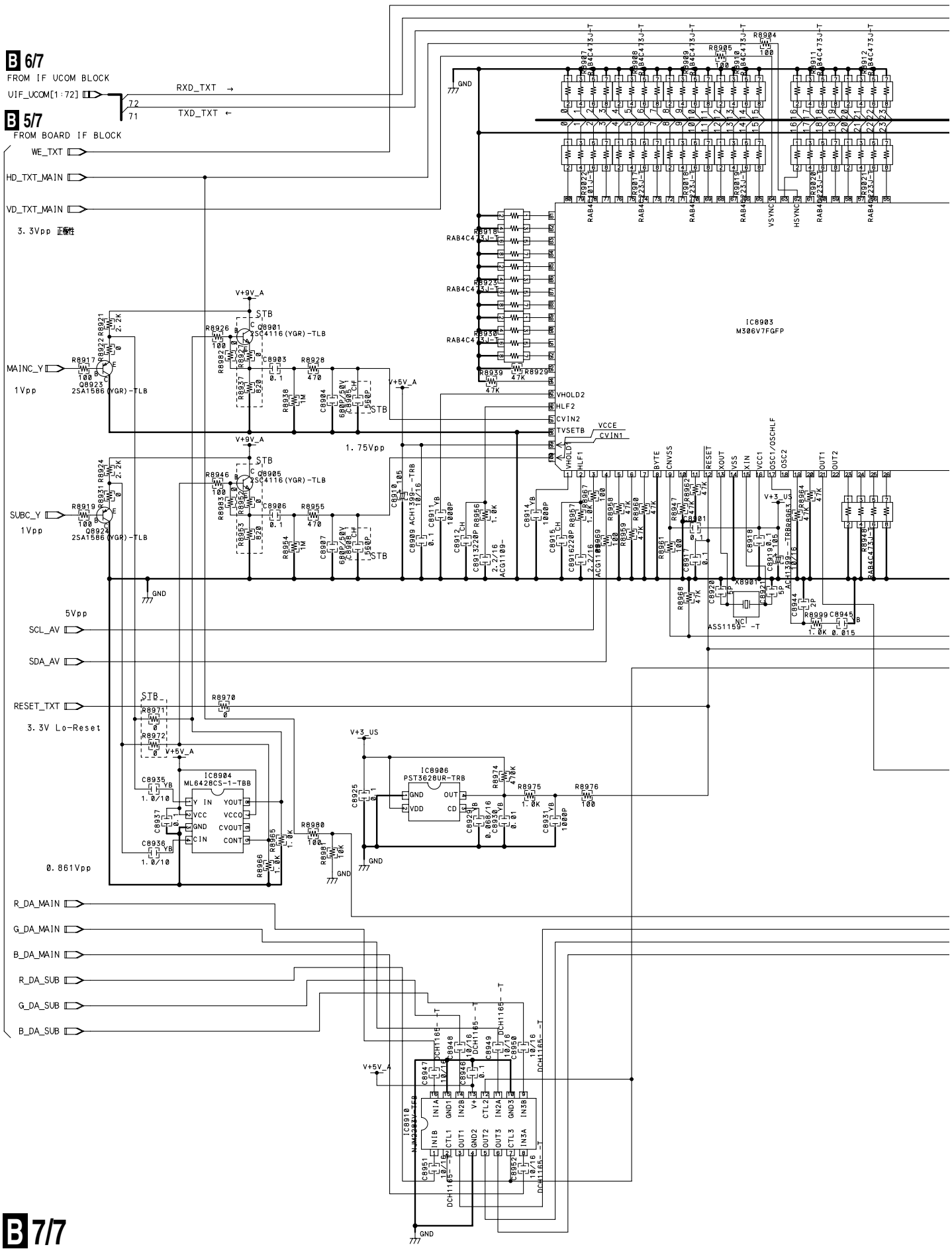


B 6/7



	USED	VACANT (AWZ6802)	VACANT (AWZ6819)
R	8701-8774	8738, 8755, 8763, 8768-8771	8738, 8755, 8763, 8768-8771
C	8701-8716	8711, 8714-8715	8711, 8714-8715
Q	8701-8703		
D			
X	8701-8702		
IC	8701-8705		
CN	8701		

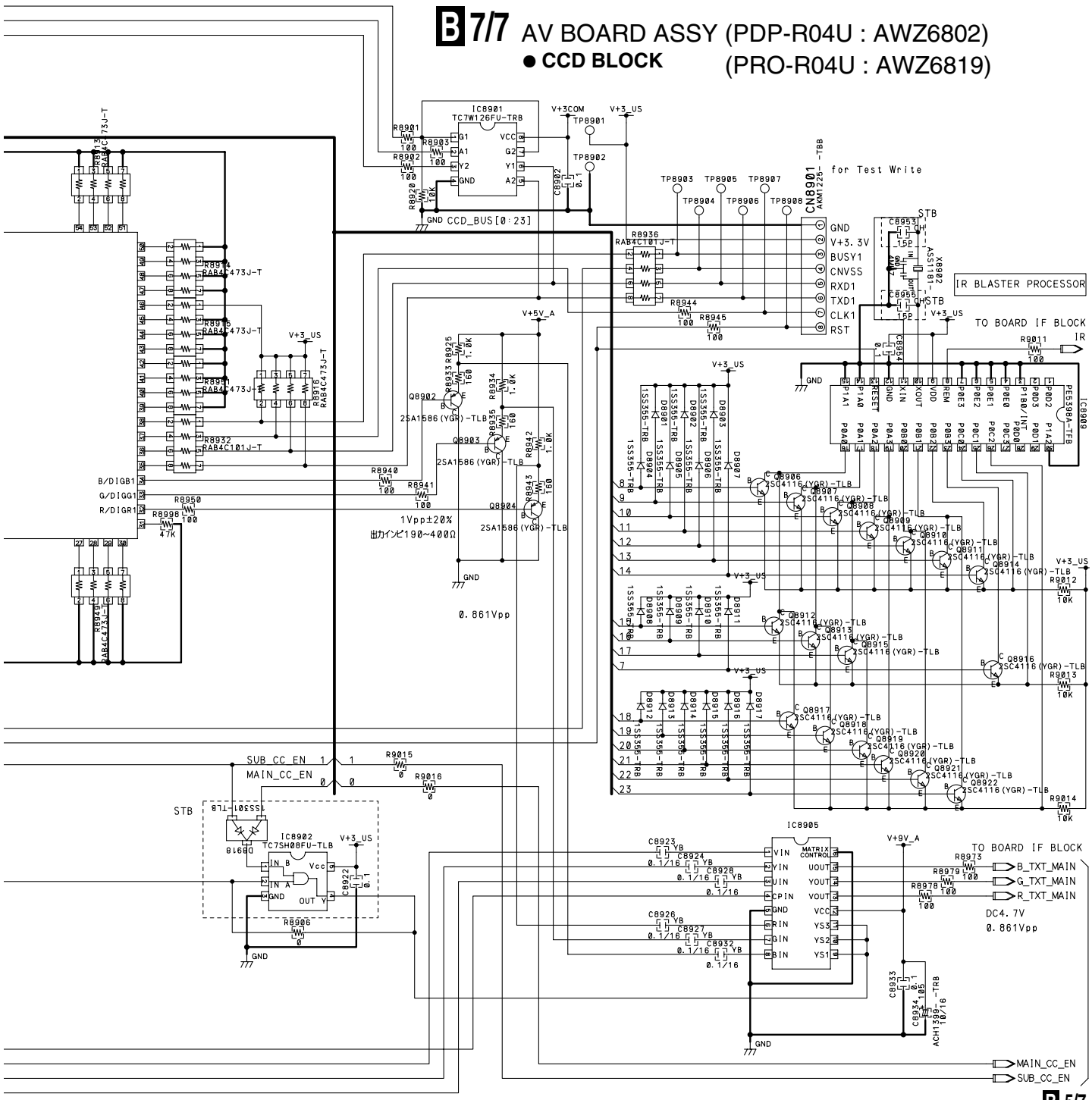
3.22 AV BOARD ASSY (7/7)



B 7/7

B 7/7 AV BOARD ASSY (PDP-R04U : AWZ6802) (PRO-R04U : AWZ6819)

● CCD BLOCK



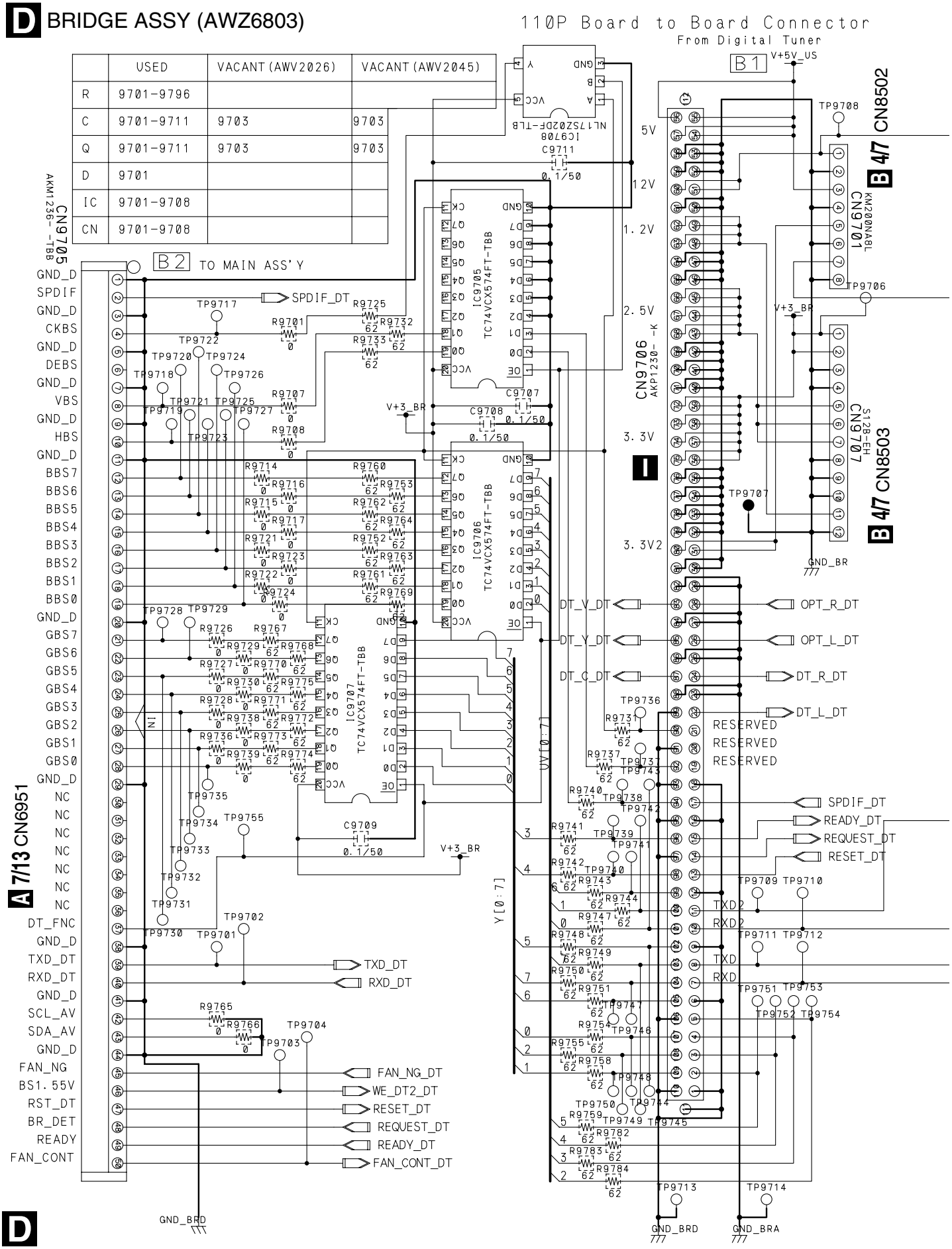
	USED	VACANT (AWZ6802)	VACANT (AWZ6819)
R	8901-8983	8977	8977
C	8901-8955	8938-8943	8938-8943
Q	8901-8924		
D	8901-8918		
X	8901-8902		
IC	8901-8910	8907-8908	8907-8908
CN	8901		

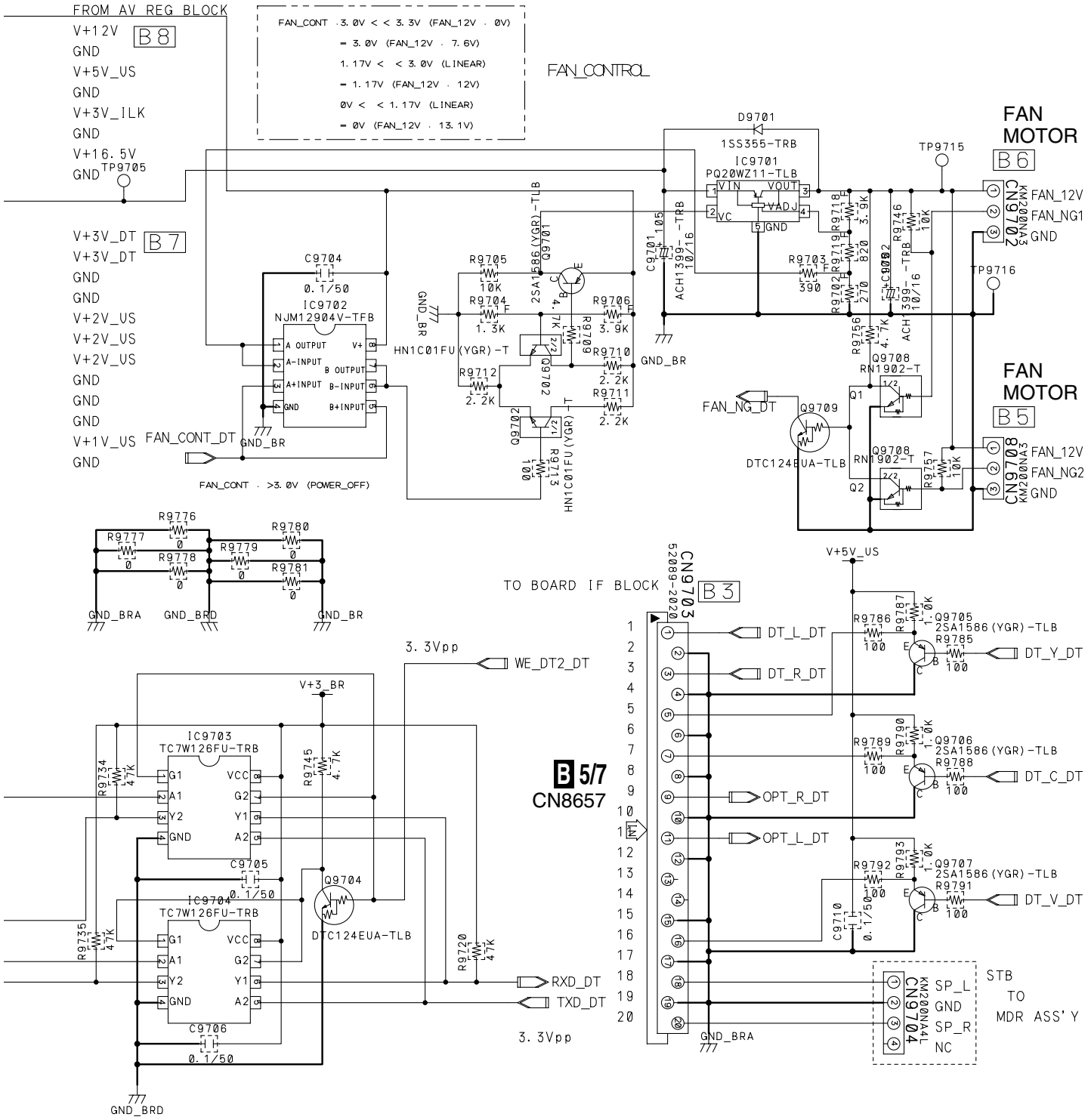
B 7/7

3.23 BRIDGE ASSY

D BRIDGE ASSY (AWZ6803)

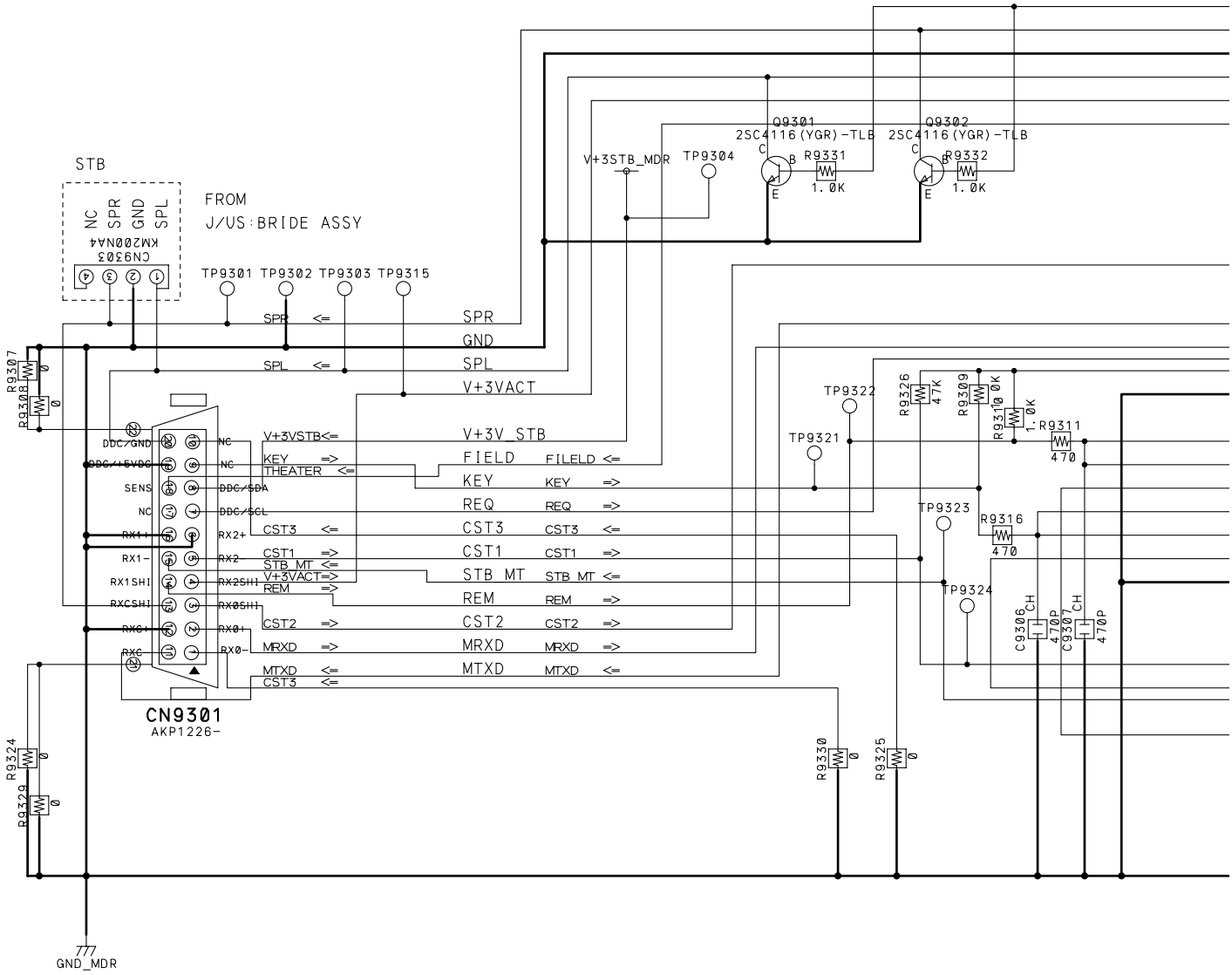
	USED	VACANT (AWV2026)	VACANT (AWV2045)
R	9701-9796		
C	9701-9711	9703	9703
Q	9701-9711	9703	9703
D	9701		
IC	9701-9708		
CN	9701-9708		

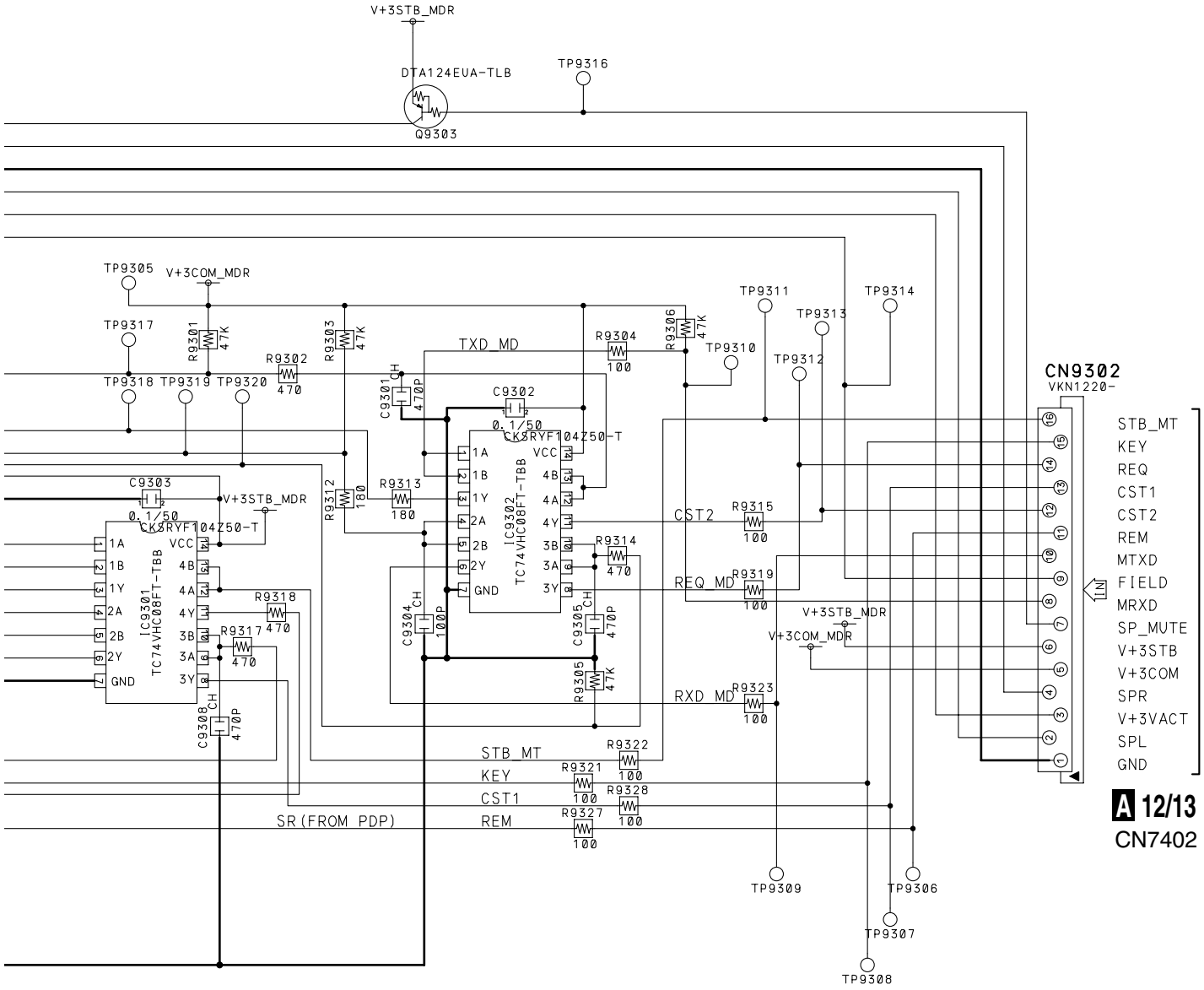



FROM AV REG BLOCK
V+12V
GND
V+5V_US
GND
V+3V_ILK
GND
V+16.5V
GND
TP9705
B8
V+3V_DT
V+3V_DT
GND
GND
V+2V_US
V+2V_US
V+2V_US
GND
GND
GND
V+1V_US
GND
B7
FAN_CONT_DT
GND_BR
FAN_CONT : 3.0V < < 3.3V (FAN_12V : 0V)
= 3.0V (FAN_12V : 7.6V)
1.17V < < 3.0V (LINEAR)
= 1.17V (FAN_12V : 12V)
0V < < 1.17V (LINEAR)
= 0V (FAN_12V : 13.1V)
FAN_CONTROL
FAN_CONT : >3.0V (POWER_OFF)
D9701
1SS355-TRB
IC9701
PQ20WZ11-TLB
VIN
VOUT
VADJ
VC
GND
TP9715
TP9716
FAN MOTOR
B6
CN9702
KM200NA3
FAN_12V
FAN_NG1
GND
FAN MOTOR
B5
CN9708
KM200NA3
FAN_12V
FAN_NG2
GND
C9704
0.1/50
IC9702
NJM12904V-TFB
A OUTPUT
A-INPUT
A+INPUT
GND
B OUTPUT
B-INPUT
B+INPUT
V+
R9705
10K
R9704
1.3K
2SA1586(YGR)-TLB
Q9701
R9706
3.9K
R9709
22
Q9702
R9710
2.2K
R9712
2.2K
R9711
2.2K
Q9702
R9713
100
HN1C01FU(YGR)-T
GND_BR
C9701
ACH1399-105-TRB
10/16
R9703
390
R9702
270
R9718
3.9K
R9719
820
C9702
R9746
10K
R9756
4.7K
C9703
ACH1399-105-TRB
10/16
Q9708
RN1902-T
Q1
Q2
FAN_NG_DT
Q9709
DTC124EUA-TLB
R9757
10K
R9776
0
R9777
0
R9778
0
R9779
0
R9780
0
R9781
0
GND_BRA
GND_BRD
GND_BR
TO BOARD IF BLOCK
B3
CN9703
52089-2020
V+5V_US
DT_L_DT
DT_R_DT
OPT_R_DT
OPT_L_DT
Q9705
2SA1586(YGR)-TLB
R9786
100
R9787
1.0K
R9785
100
DT_Y_DT
Q9706
2SA1586(YGR)-TLB
R9789
100
R9790
1.0K
R9788
100
DT_C_DT
Q9707
2SA1586(YGR)-TLB
R9792
100
R9793
1.0K
R9791
100
DT_V_DT
C9710
0.1/50
GND_BRA
B5/7
CN8657
CN9704
KM200NA4L
SP_L
GND
SP_R
NC
STB
TO
MDR ASS'Y
3.3Vpp
WE_DT2_DT
V+3_BR
IC9703
TC7W126FU-TRB
G1
A1
Y2
GND
VCC
G2
Y1
A2
R9734
4.7K
R9745
4.7K
C9705
0.1/50
IC9704
TC7W126FU-TRB
Q9704
DTC124EUA-TLB
R9735
4.7K
R9720
4.7K
RXD_DT
TXD_DT
3.3Vpp
C9706
0.1/50
GND_BRD

3.24 MDR ASSY

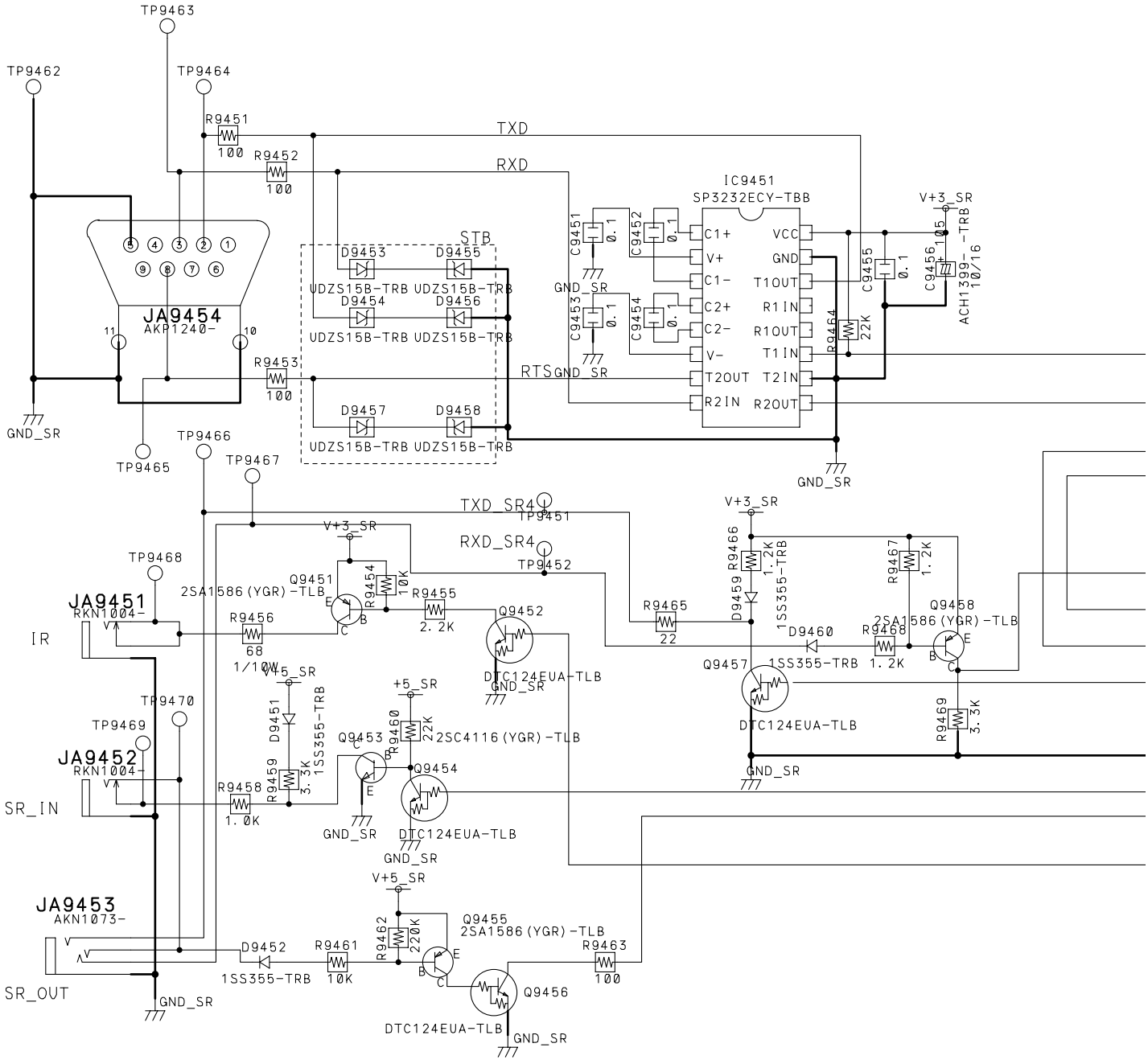
E MDR ASSY (AWZ6778)

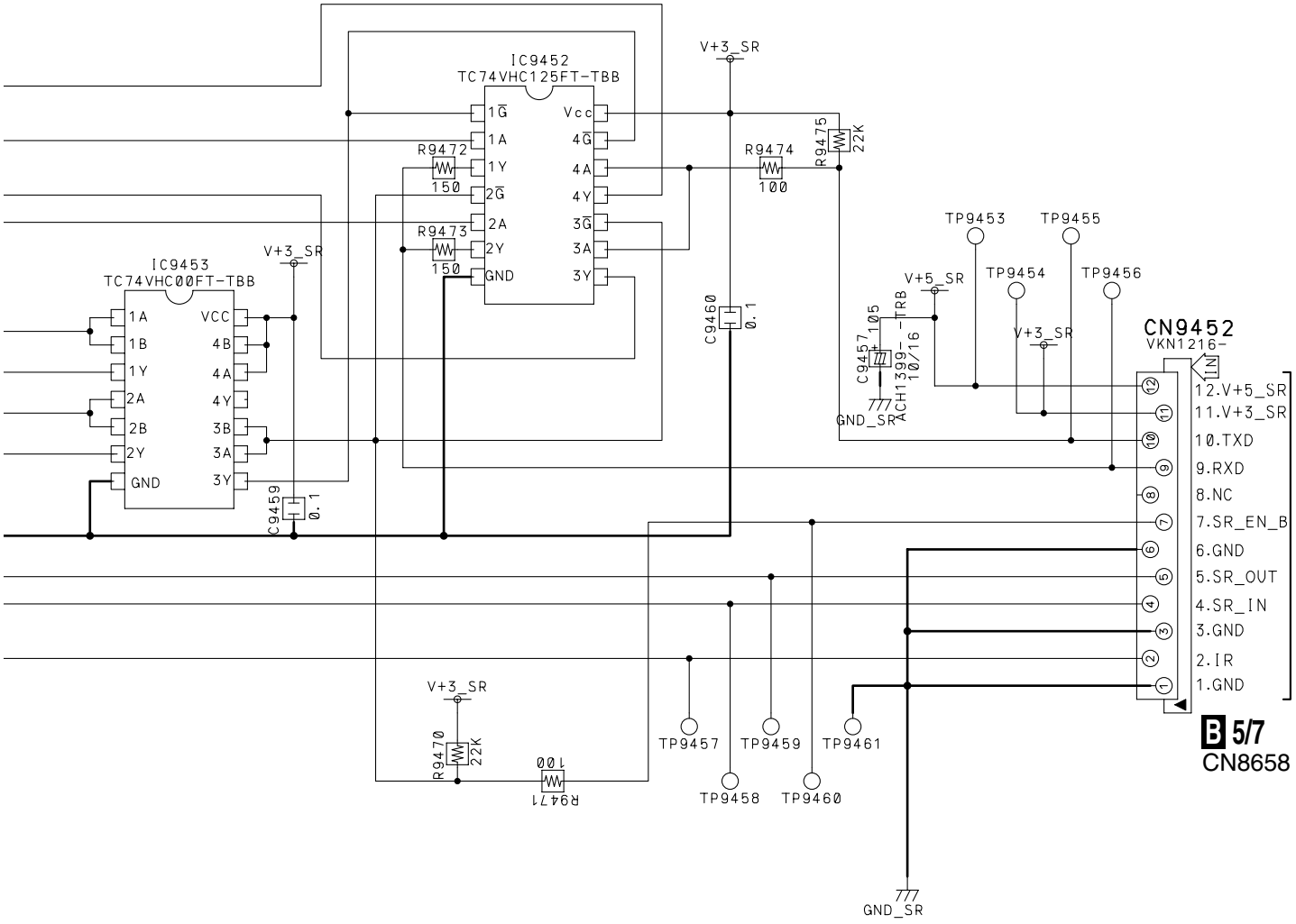



V+3STB_MDR
DTA124EUA-TLB
Q9303
TP9316
TP9305
V+3COM_MDR
TP9317
TP9318
TP9319
TP9320
R9301 47K
R9302 470
R9303 47K
R9304 100
R9306 47K
TXD_MD
TP9310
TP9311
TP9312
TP9313
TP9314
C9301 CH 470P
C9302 0.1/50 CK3RYF104Z50-T
C9303 0.1/50 CK3RYF104Z50-T
C9304 CH 100P
C9305 CH 470P
C9308 CH 470P
IC9301 TC74VHC08FT-TBB
IC9302 TC74VHC08FT-TBB
R9312 180
R9313 180
R9314 470
R9315 100
R9317 470
R9318 470
R9319 100
R9321 100
R9322 100
R9323 100
R9327 100
R9328 100
CST2
REQ_MD
RXD_MD
STB_MT
KEY
CST1
REM
SR(FROM PDP)
CN9302
VKN1220-
STB_MT
KEY
REQ
CST1
CST2
REM
MTXD
FIELD
MRXD
SP_MUTE
V+3STB
V+3COM
SPR
V+3VACT
SPL
GND
A 12/13
CN7402
TP9309
TP9306
TP9307
TP9308

3.25 SR ASSY

F SR ASSY (AWZ6780)

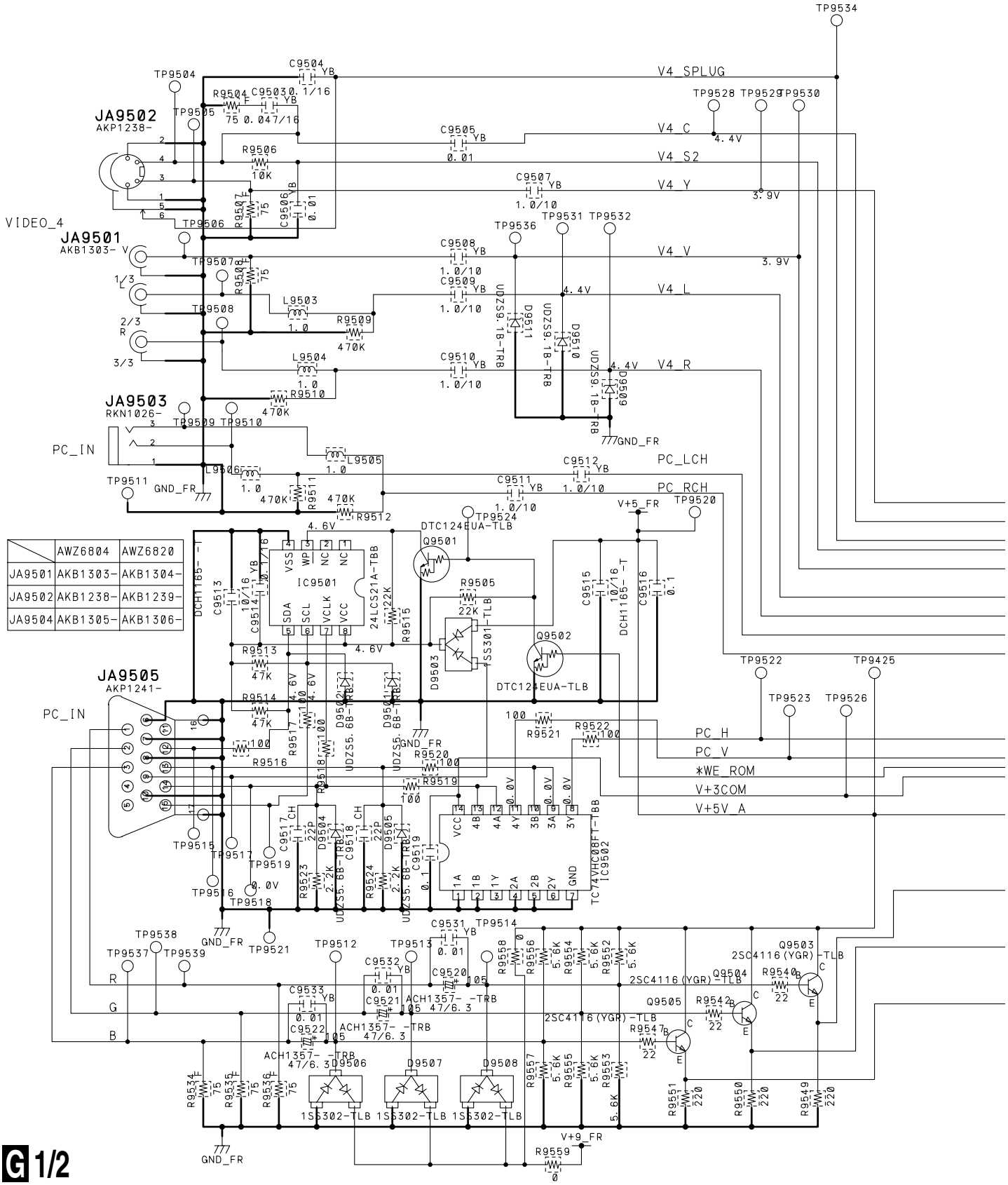



IC9452
TC74VHC125FT-TBB
1G̅
1A
1Y
2G̅
2A
2Y
GND
Vcc
4G̅
4A
4Y
3G̅
3A
3Y
IC9453
TC74VHC00FT-TBB
1A
1B
1Y
2A
2B
2Y
GND
VCC
4B
4A
4Y
3B
3A
3Y
V+3_SR
V+5_SR
R9472
150
R9473
150
R9474
100
R9475
22K
R9470
22K
R9471
100
C9459
0.1
C9460
0.1
C9457
105
ACH1399-TRB
10/16
GND_SR
TP9453
TP9455
TP9454
TP9456
TP9457
TP9459
TP9461
TP9458
TP9460
CN9452
VKN1216-
12.V+5_SR
11.V+3_SR
10.TXD
9.RXD
8.NC
7.SR_EN_B
6.GND
5.SR_OUT
4.SR_IN
3.GND
2.IR
1.GND
B 5/7
CN8658

3.26 FRONT ASSY (1/2)

G 1/2 FRONT ASSY (PDP-R04U : AWZ6804)

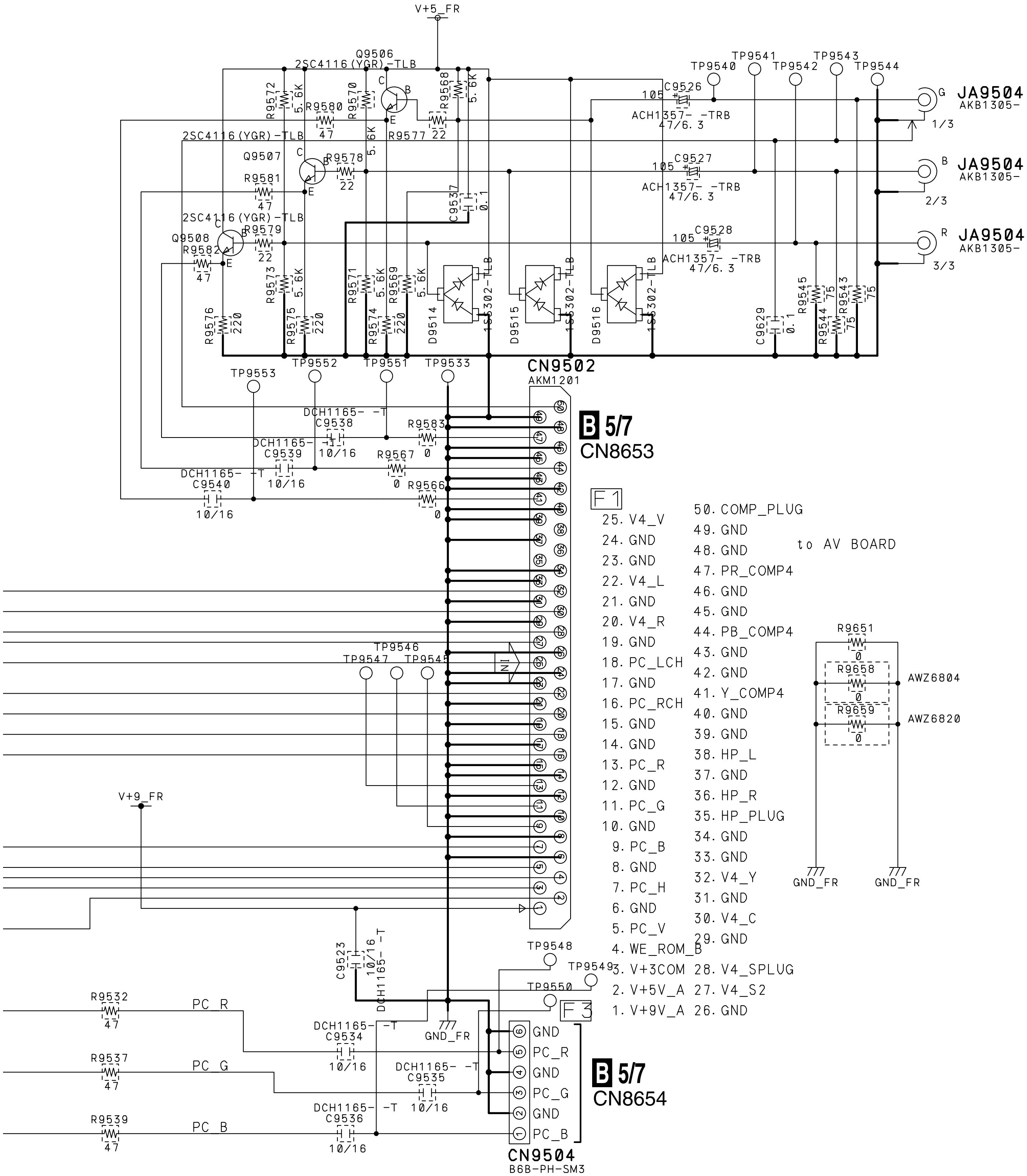
● **FRONT BLOCK** (PRO-R04U : AWZ6820)



	AWZ6804	AWZ6820
JA9501	AKB1303-	AKB1304-
JA9502	AKB1238-	AKB1239-
JA9504	AKB1305-	AKB1306-

G 1/2

A B C D E F

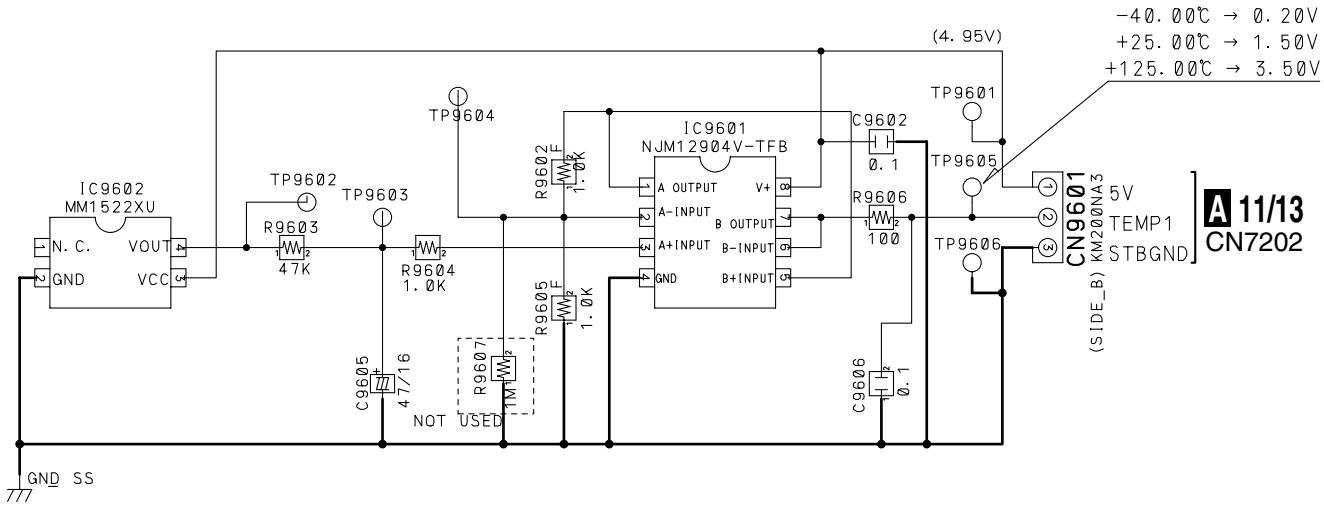

V+5_FR
Q9506
2SC4116(YGR)-TLB
Q9507
2SC4116(YGR)-TLB
Q9508
2SC4116(YGR)-TLB
R9572 5.6K
R9580 47
R9570 5.6K
R9568 5.6K
R9577 22
R9578 22
R9581 47
R9579 22
R9582 47
R9573 5.6K
R9571 5.6K
R9569 5.6K
R9576 220
R9575 220
R9574 220
C9537 0.1
D9514 1SS302-TLB
D9515 1SS302-TLB
D9516 1SS302-TLB
TP9540
TP9541
TP9542
TP9543
TP9544
C9526 105 ACH1357- -TRB 47/6.3
C9527 105 ACH1357- -TRB 47/6.3
C9528 105 ACH1357- -TRB 47/6.3
JA9504 AKB1305- G 1/3
JA9504 AKB1305- B 2/3
JA9504 AKB1305- R 3/3
C9629 0.1
R9545 75
R9544 75
R9543 75
TP9553
TP9552
TP9551
TP9533
CN9502
AKM1201
DCH1165- -T C9538 10/16
DCH1165- -T C9539 10/16
DCH1165- -T C9540 10/16
R9583 0
R9567 0
R9566 0
B 5/7
CN8653
F1
25. V4_V
24. GND
23. GND
22. V4_L
21. GND
20. V4_R
19. GND
18. PC_LCH
17. GND
16. PC_RCH
15. GND
14. GND
13. PC_R
12. GND
11. PC_G
10. GND
9. PC_B
8. GND
7. PC_H
6. GND
5. PC_V
4. WE_ROM_B
3. V+3COM
2. V+5V_A
1. V+9V_A
50. COMP_PLUG
49. GND
48. GND
47. PR_COMP4
46. GND
45. GND
44. PB_COMP4
43. GND
42. GND
41. Y_COMP4
40. GND
39. GND
38. HP_L
37. GND
36. HP_R
35. HP_PLUG
34. GND
33. GND
32. V4_Y
31. GND
30. V4_C
29. GND
28. V4_SPLUG
27. V4_S2
26. GND
to AV BOARD
R9651 0
R9658 0
R9659 0
AWZ6804
AWZ6820
GND_FR
GND_FR
TP9546
TP9547
TP9545
V+9_FR
C9523 10/16 DCH1165- -T
TP9548
TP9549
TP9550
F3
GND_FR
R9532 47
R9537 47
R9539 47
PC R
PC G
PC B
DCH1165- -T C9534 10/16
DCH1165- -T C9535 10/16
DCH1165- -T C9536 10/16
GND
PC_R
GND
PC_G
GND
PC_B
B 5/7
CN8654
CN9504
B6B-PH-SM3

G 1/2

3.27 FRONT ASSY (2/2)

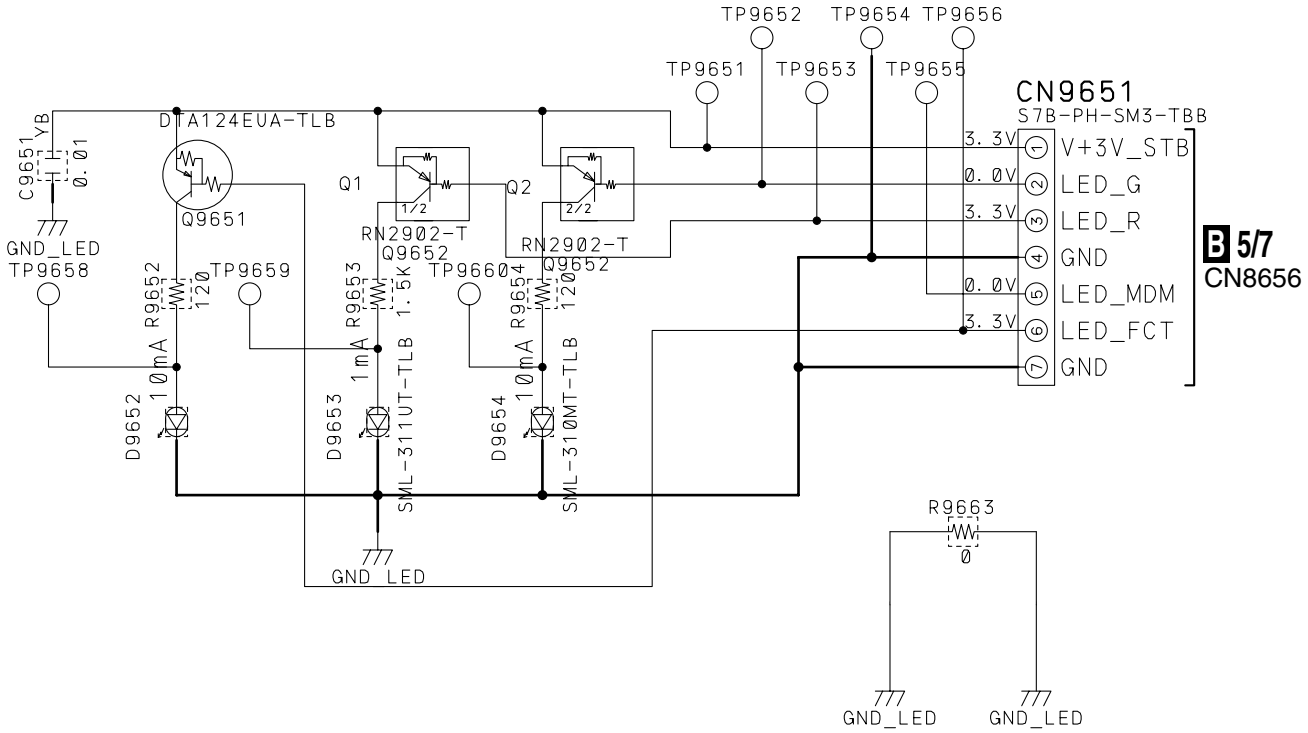
G 2/2 FRONT ASSY (PDP-R04U : AWZ6804)
(PRO-R04U : AWZ6820)

● **SENSOR BLOCK**

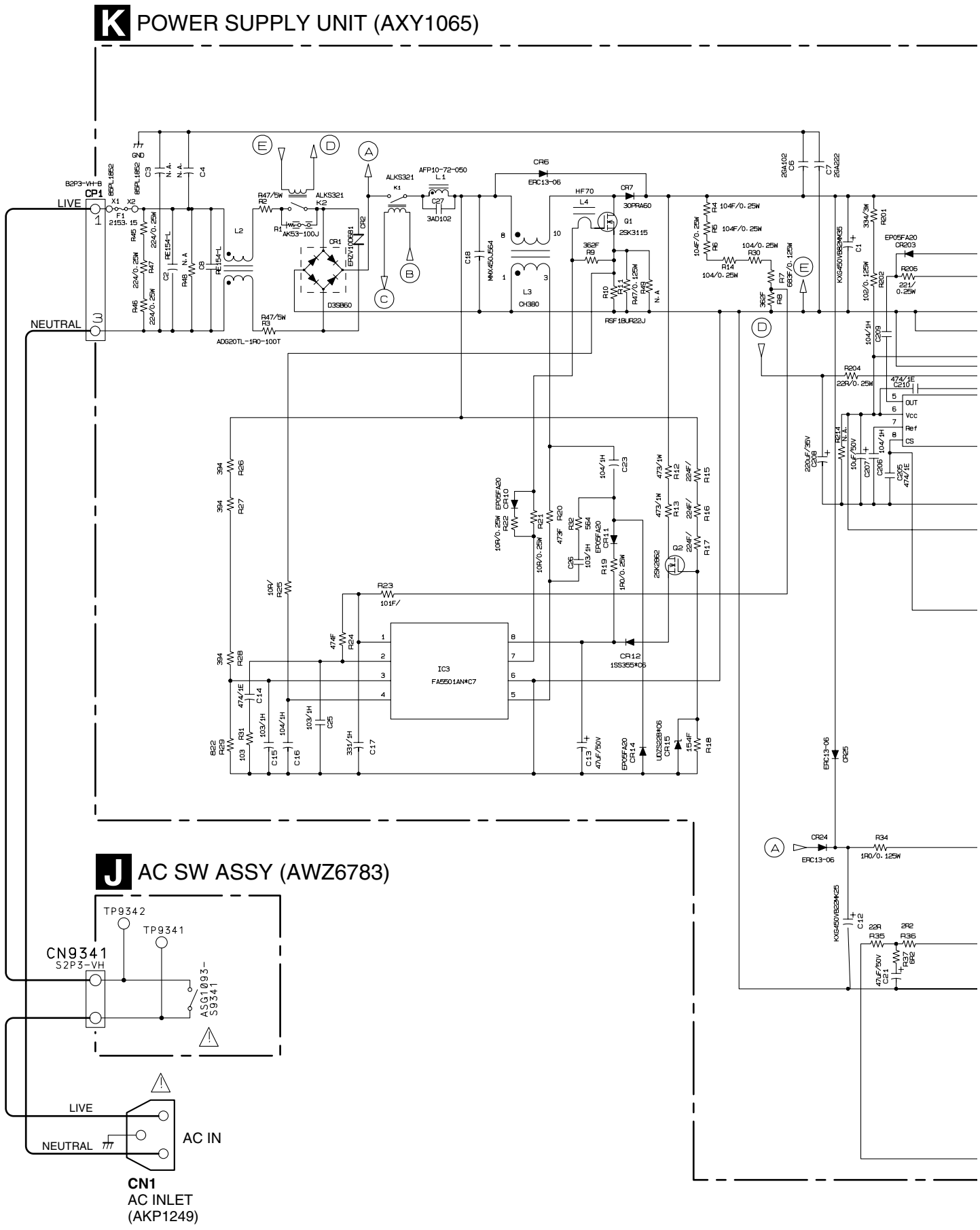


3.28 LED ASSY

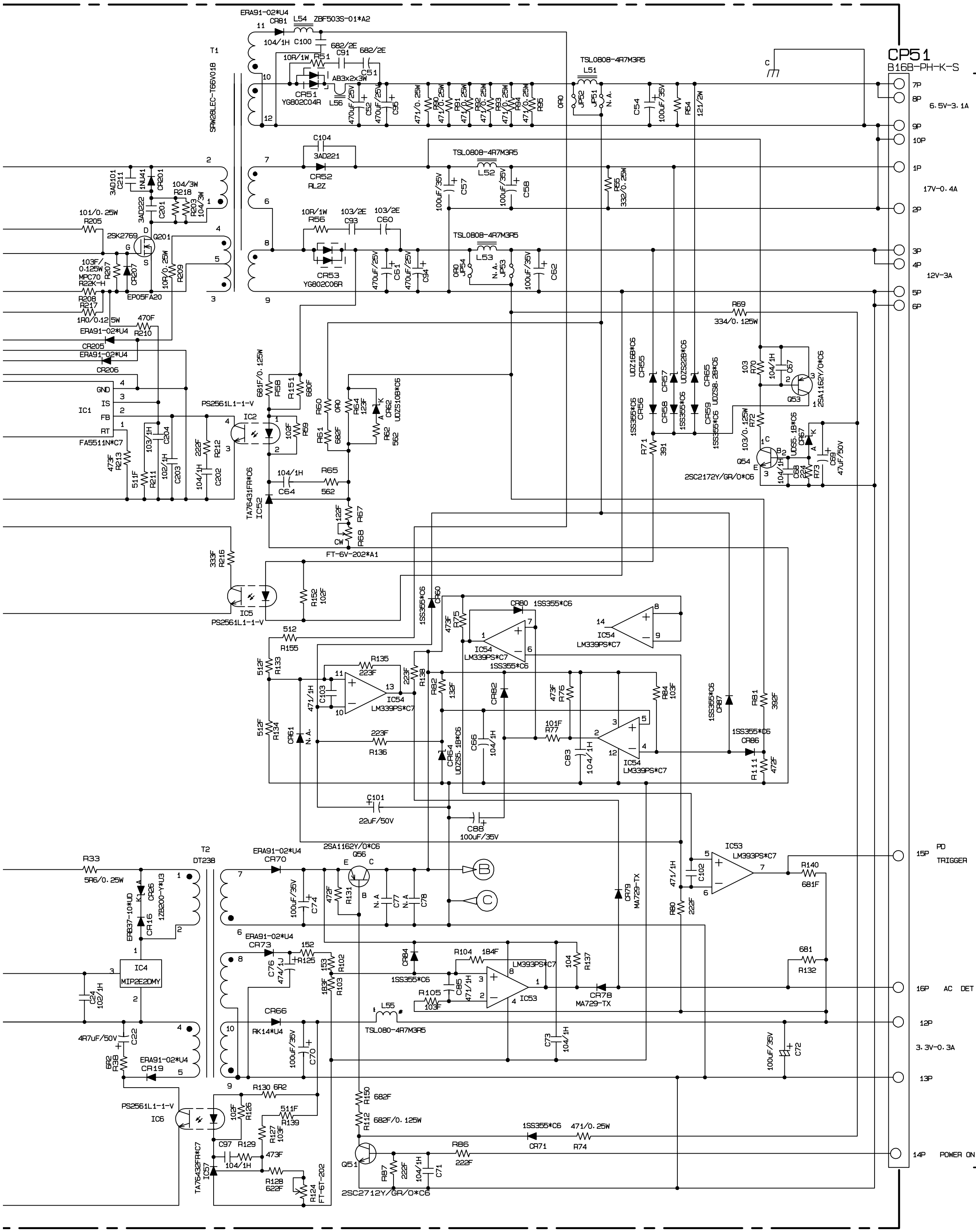
H LED ASSY (AWZ6805)



3.29 AC SW ASSY and POWER SUPPLY UNIT



A B C D E F


CP51
B16B-PH-K-S
6.5V-3.1A
17V-0.4A
12V-3A
PD TRIGGER
AC DET
3.3V-0.3A
POWER ON
T1
T2
DT238
IC1
FA5511N*C7
IC2
PS2561L1-1-V
IC5
IC6
IC4
MIP2E2DMY
IC52
TA76431FR*C6
IC53
LM393PS*C7
IC54
LM339PS*C7
Q201
2SK2769
Q51
2SC2712Y/GR/O*C6
Q53
2SA1162Y/O*C6
Q54
2SC2172Y/GR/O*C6
Q56
2SA1162Y/O*C6
B 4/6
CN8501

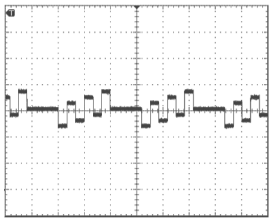
K

3.30 WAVEFORMS

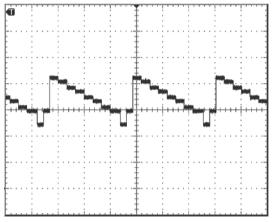
Note : The encircled numbers denote measuring point in the schematic diagram.

A MR MAIN BOARDASSY

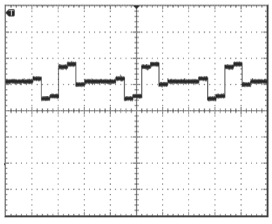
1 TP6402 (Component B)
V: 500mV/div. H: 20µsec/div.



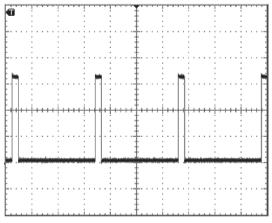
2 TP6403 (Component G)
V: 500mV/div. H: 20µsec/div.



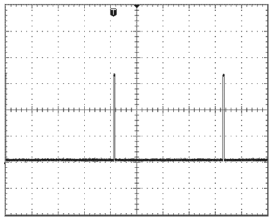
3 TP6404 (Component R)
V: 500mV/div. H: 20µsec/div.



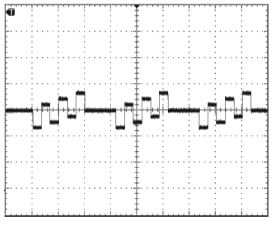
4 TP6405 (HD2_MAIN)
V: 1V/div. H: 20µsec/div.



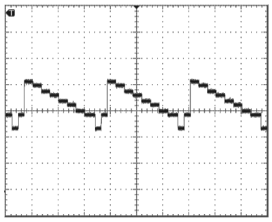
5 TP6406 (VD2_MAIN)
V: 1V/div. H: 400msec/div.



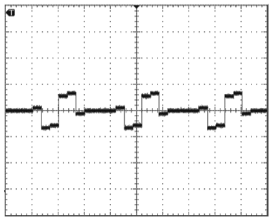
6 TP6604 (Component B)
V: 500mV/div. H: 20µsec/div.



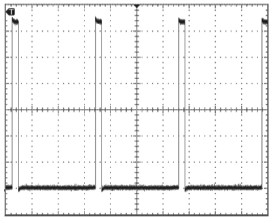
7 TP6605 (Component G)
V: 500mV/div. H: 20µsec/div.



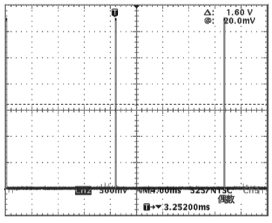
8 TP6606 (Component R)
V: 500mV/div. H: 20µsec/div.



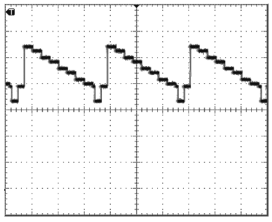
9 TP6607 (HD2_SUB)
V: 500mV/div. H: 20µsec/div.



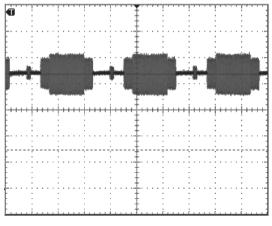
10 TP6608 (VD2_SUB)
V: 500mV/div. H: 4msec/div.



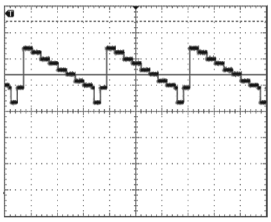
11 TP7451 (MAIN_Y)
V: 1V/div. H: 20µsec/div.



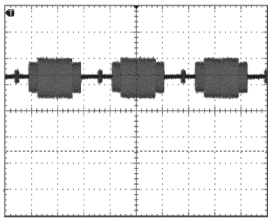
12 TP7452 (MAIN_C)
V: 1V/div. H: 20µsec/div.



13 TP7456 (SUB_Y)
V: 1V/div. H: 20µsec/div.

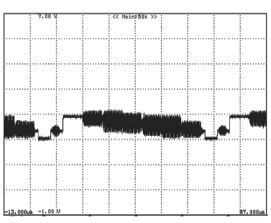


14 TP7457 (SUB_C)
V: 1V/div. H: 20µsec/div.

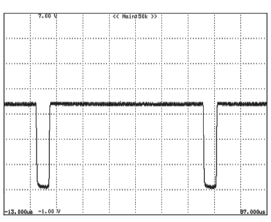


B AV BOARD ASSY

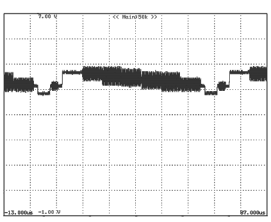
1 TP7514 (AIR_V)
V: 1V/div. H: 10µsec/div.



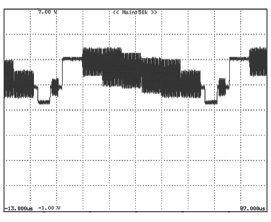
2 R7541 - R7542 (AIR_HS)
V: 1V/div. H: 10µsec/div.



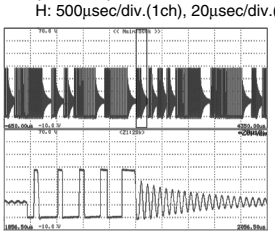
3 IC8002-pin 63 (AIR_V)
V: 1V/div. H: 10µsec/div.



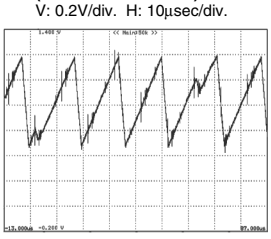
4 IC8002-pin 44 (MAIN_Y)
V: 1V/div. H: 10µsec/div.



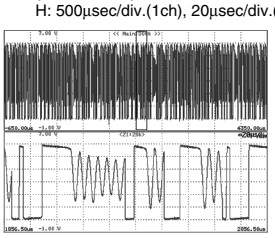
5 IC8503-pin 1 (SW COLLECTOR) (36V VDD) V: 10V/div.
H: 500µsec/div.(1ch), 20µsec/div.(2ch)



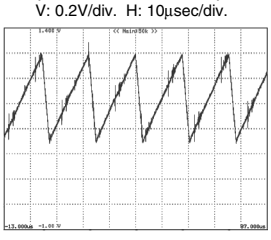
6 IC8503-pin 3 (TIMING CAPACITOR) (36V VDD Oscillation)
V: 0.2V/div. H: 10µsec/div.



7 IC8501-pin 1 (SW COLLECTOR) (STB5V VDD) V: 1V/div.
H: 500µsec/div.(1ch), 20µsec/div.(2ch)



8 IC8501-pin 3 (TIMING CAPACITOR) (STB5V VDD Oscillation)
V: 0.2V/div. H: 10µsec/div.



3.31 VOLTAGES

B AV BOARD ASSY **A** MR MAIN BOARD ASSY

CN8652 (AKM1201)		Voltage (V)	CN7455 (AKM1201)	
No.	Name		Name	No.
1	SP_R	0.0	SP_R	50
2	GND	0.0	GND	49
3	SP_L	0.0	SP_L	48
4	GND	0.0	GND	47
5	HDMI_RCH	2.5	HDMI_RCH	46
6	GND	0.0	GND	45
7	HDMI_LCH	2.2	HDMI_LCH	44
8	GND	0.0	GND	43
9	NC	–	NC	42
10	GND	0.0	GND	41
11	GND	0.0	GND	40
12	GND	0.0	GND	39
13	GND	0.0	GND	38
14	GND	0.0	GND	37
15	GND	0.0	GND	36
16	GND	0.0	GND	35
17	GND	0.0	GND	34
18	GND	0.0	GND	33
19	GND	0.0	GND	32
20	GND	0.0	GND	31
21	GND	0.0	GND	30
22	SUB_CC_EN	0.3	SUB_CC_EN	29
23	MAIN_CC_EN	3.2	MAIN_CC_EN	28
24	AIR_AFT2	1.7	AIR_AFT2	27
25	AIR_HS2	0.4	AIR_HS2	26
26	AIR_AFT	1.7	AIR_AFT	25
27	AIR_HS	0.4	AIR_HS	24
28	RST_IF	3.3	RST_IF	23
29	TXD_WR	3.3	TXD_WR	22
30	RXD_WR	3.3	RXD_WR	21
31	SDA_AV	5.0	SDA_AV	20
32	SCL_AV	5.0	SCL_AV	19
33	RXD_IF	3.3	RXD_IF	18
34	TXD_IF	3.3	TXD_IF	17
35	CLK_IF	3.3	CLK_IF	16
36	REQ_IF	0.0	REQ_IF	15
37	BUSY_IF	0.0	BUSY_IF	14
38	CE_IF	3.3	CE_IF	13
39	RESET_TXT	3.2	RESET_TXT	12
40	RELAY	3.1	RELAY	11
41	SR_OUT	3.3	SR_OUT	10
42	PSW1	0.0	PSW1	9
43	PD_MAIN	0.0	PD_MAIN	8
44	PD_DCDC1	3.3	PD_DCDC1	7
45	WE_ROM_B	0.0	WE_ROM_B	6
46	MON_MUTE	0.0	MON_MUTE	5
47	NC	–	NC	4
48	KEYSCAN	3.3	KEYSCAN	3
49	STB_MT	0.0	STB_MT	2
50	CST1	0.0	CST1	1

B AV BOARD ASSY **A** MR MAIN BOARD ASSY

CN8504 (KM200NA15)		Voltage (V)	CN7451 (S15B-PH-SM3)	
No.	Name		Name	No.
1	GND	0.0	GND	1
2	V+3V_STB	3.3	V+3V_STB	2
3	GND	0.0	GND	3
4	V+3V_UCOM	3.3	V+3V_UCOM	4
5	GND	0.0	GND	5
6	V+5V_AV	5.0	V+5V_AV	6
7	GND	0.0	GND	7
8	V+6V	6.7	V+6V	8
9	GND_D	0.0	GND_D	9
10	V+1V_DD	1.5	V+1V_DD	10
11	V+1V_DD	1.5	V+1V_DD	11
12	GND_D	0.0	GND_D	12
13	V+3V_DD	3.3	V+3V_DD	13
14	V+3V_DD	3.3	V+3V_DD	14
15	GND_D	0.0	GND_D	15

B AV BOARD ASSY **D** BRIDGE ASSY

CN8657 (AKM1235)		Voltage (V)	CN9703 (52089-2020)	
No.	Name		Name	No.
1	NC	–	NC	20
2	GND	0.0	GND	19
3	NC	–	NC	18
4	GND	0.0	GND	17
5	DT_VIDEO	1.0	DT_VIDEO	16
6	GND	0.0	GND	15
7	NC	–	NC	14
8	NC	–	NC	13
9	GND	0.0	GND	12
10	OPT_L	0.0	OPT_L	11
11	GND	0.0	GND	10
12	OPT_R	0.0	OPT_R	9
13	GND	0.0	GND	8
14	DT_C	1.3	DT_C	7
15	GND	0.0	GND	6
16	DT_Y	1.0	DT_Y	5
17	GND	0.0	GND	4
18	DT_R	6.1	DT_R	3
19	GND	0.0	GND	2
20	DT_L	6.1	DT_L	1

B AV BOARD ASSY **A** MR MAIN BOARD ASSY

CN8651 (AKM1201)		Voltage (V)	CN7454 (AKM1201)	
No.	Name		Name	No.
1	DSUB_DET	0.00	DSUB_DET	50
2	WE_TXT	0.01	WE_TXT	49
3	PN2	0.00	PN2	48
4	VD_TXT	0.00	VD_TXT	47
5	HD_TXT	0.20	HD_TXT	46
6	PCA_V	0.00	PCA_V	45
7	PCA_H	0.00	PCA_H	44
8	GND	0.00	GND	43
9	GND	0.00	GND	42
10	GND	0.00	GND	41
11	REC_SW	3.33	REC_SW	40
12	GND	0.00	GND	39
13	SUBC_PR	4.44	SUBC_PR	38
14	GND	0.00	GND	37
15	SUBC_Y	4.44	SUBC_Y	36
16	GND	0.00	GND	35
17	SUBC_PB	4.41	SUBC_PB	34
18	GND	0.00	GND	33
19	GND	0.00	GND	32
20	GND	0.00	GND	31
21	GND	0.00	GND	30
22	GND	0.00	GND	29
23	MAINC_PR	4.44	MAINC_PR	28
24	GND	0.00	GND	27
25	MAINC_Y	4.42	MAINC_Y	26
26	GND	0.00	GND	25
27	MAINC_PB	4.43	MAINC_PB	24
28	GND	0.00	GND	23
29	R_TXT_MAIN	4.78	R_TXT_MAIN	22
30	G_TXT_MAIN	4.78	G_TXT_MAIN	21
31	B_TXT_MAIN	4.78	B_TXT_MAIN	20
32	GND	0.00	GND	19
33	B_DA_SUB	0.68	B_DA_SUB	18
34	G_DA_SUB	0.68	G_DA_SUB	17
35	R_DA_SUB	0.68	R_DA_SUB	16
36	GND	0.00	GND	15
37	SUB_C	4.32	SUB_C	14
38	GND	0.00	GND	13
39	SUB_Y	3.20	SUB_Y	12
40	GND	0.00	GND	11
41	B_DA_MAIN	1.08	B_DA_MAIN	10
42	GND	0.00	GND	9
43	G_DA_MAIN	1.08	G_DA_MAIN	8
44	GND	0.00	GND	7
45	R_DA_MAIN	1.08	R_DA_MAIN	6
46	GND	0.00	GND	5
47	MAIN_C	4.41	MAIN_C	4
48	GND	0.00	GND	3
49	MAIN_Y	4.39	MAIN_Y	2
50	GND	0.00	GND	1

B AV BOARD ASSY — **H** LED ASSY

CN8656 (KM200NA7)		Voltage (V)	CN7651 (S7B-PH-SM3)	
No.	Name		Name	No.
1	V+3V_STB	3.3	V+3V_STB	1
2	LED_G	3.3	LED_G	2
3	LED_R	0	LED_R	3
4	GND	0	GND	4
5	NC	–	NC	5
6	LED_FCT	3.3	LED_FCT	6
7	GND	0.0	GND	7

A MR MAIN BOARD ASSY — **G** FRONT ASSY

CN7202 (B3B-PH-SM3)		Voltage (V)	CN9601 (KM200NA3)	
No.	Name		Name	No.
1	V+5V_AV	5.0	V+5V_AV	1
2	TEMP2	1.7	TEMP2	2
3	GND	0.0	GND	3

B AV BOARD ASSY — **K** POWER SUPPLY UNIT

CN8501 (KM200NA16)		Voltage (V)	CP51 (KM200NA16)	
No.	Name		Name	No.
1	V+16.5V	17.9	V+16.5V	1
2	GND	0	GND	2
3	V+12V	12.1	V+12V	3
4	V+12V	12.1	V+12V	4
5	GND	0	GND	5
6	GND	0	GND	6
7	V+6.5V	6.8	V+6.5V	7
8	V+6.5V	6.8	V+6.5V	8
9	GND	0	GND	9
10	GND	0	GND	10
11	NC	–	NC	11
12	V+3V_STB	3.3	V+3V_STB	12
13	GND	0	GND	13
14	RELAY	3.1	RELAY	14
15	PD_TRIGGER	0.1	PD_TRIGGER	15
16	AC_DET	3.3	AC_DET	16

B AV BOARD ASSY — **F** SR ASSY

CN8658 (AKM1233)		Voltage (V)	CN9452 (VKN1216)	
No.	Name		Name	No.
1	V+5V_STB	5.0	V+5V_STB	12
2	V+3V_STB	3.3	V+3V_STB	11
3	TXD	3.3	TXD	10
4	RXD	3.3	RXD	9
5	SR_DET_B	3.3	SR_DET_B	8
6	SR_CONT	3.3	SR_CONT	7
7	GND	0.0	GND	6
8	SR_OUT	3.3	SR_OUT	5
9	SR_IN	3.3	SR_IN	4
10	GND	0.0	GND	3
11	IR	0.0	IR	2
12	GND	0.0	GND	1

A MR MAIN BOARD ASSY — TRAP SW

CN7203 (AKM1213)		Voltage (V)		
No.	Name		Name	No.
1	TRAP_SW	0.7		
2	NC			
3	V+3V_UCOM	3.3		

B AV BOARD ASSY — **D** BRIDGE ASSY

CN8503 (S12B-EH)		Voltage (V)	CN9707 (S12B-EH)	
No.	Name		Name	No.
1	V+3V_DT	3.3	V+3V_DT	1
2	V+3V_DT	3.3	V+3V_DT	2
3	GND	0.0	GND	3
4	GND	0.0	GND	4
5	V+2V_US	2.5	V+2V_US	5
6	V+2V_US	2.5	V+2V_US	6
7	V+2V_US	2.5	V+2V_US	7
8	GND	0.0	GND	8
9	GND	0.0	GND	9
10	GND	0.0	GND	10
11	V+1V_US	1.3	V+1V_US	11
12	GND	0.0	GND	12

B AV BOARD ASSY — **D** BRIDGE ASSY

CN8502 (KM200NA8)		Voltage (V)	CN9701 (KM200NA8L)	
No.	Name		Name	No.
1	V+12V	12.0	V+12V	1
2	GND	0.0	GND	2
3	V+5V_US	5.0	V+5V_US	3
4	GND	0.0	GND	4
5	V+3V_ILK	3.3	V+3V_ILK	5
6	GND	0.0	GND	6
7	V+16.5V	15.5	V+16.5V	7
8	GND	0.0	GND	8

D BRIDGE ASSY — FAN MOTOR

CN9702, CN9708 (KM200NA3)		Voltage (V)		
No.	Name			
1	FAN_12V	9.7		
2	FAN_NG	0.0		
3	GND	0.0		

A MR MAIN BOARD ASSY — **E** MDR ASSY

CN7402 (VKN1606)		Voltage (V)	CN9302 (VKN1220)	
No.	Name		Name	No.
16	GND	0	GND	1
15	AUDIO_L	0	AUDIO_L	2
14	ACT3V	3.3	ACT3V	3
13	AUDIO_R	0	AUDIO_R	4
12	V+3COM	3.3	V+3COM	5
11	STB3V	3.3	STB3V	6
10	SP_MUTE	3.3	SP_MUTE	7
9	MTXD	3.3	MTXD	8
8	FIELD	0	FIELD	9
7	MRXD	3.3	MRXD	10
6	REM_B	3.3	REM_B	11
5	P_ST_B	0	P_ST_B	12
4	AC_OFF	0	AC_OFF	13
3	REQ	0	REQ	14
2	KEY_B	3.3	KEY_B	15
1	STB_MT	0	STB_MT	16

D BRIDGE ASSY — **A** MR MAIN BOARD ASSY

CN9705 (AKM1236)		Voltage (V)	CN6951 (AKM1201)	
No.	Name		Name	No.
50	FAN_CONT	2.1	FAN_CONT	50
49	READY	0.1	READY	49
48	BR_DET	3.3	BR_DET	48
47	RST_DT	3.3	RST_DT	47
46	BS1.55W	0.0	BS1.55W	46
45	FAN_NG	0.0	FAN_NG	45
44	GND_D	0.0	GND_D	44
43	SDA_AV	0.0	SDA_AV	43
42	SCL_AV	0.0	SCL_AV	42
41	GND_D	0.0	GND_D	41
40	RXD_DT	3.3	RXD_DT	40
39	TXD_DT	3.3	TXD_DT	39
38	GND_D	0.0	GND_D	38
37	DT_FNC	0.0	DT_FNC	37
36	NC	0.0	NC	36
35	NC	0.0	NC	35
34	NC	0.0	NC	34
33	NC	0.0	NC	33
32	NC	0.0	NC	32
31	NC	0.0	NC	31
30	NC	0.0	NC	30
29	GND_D	0.0	GND_D	29
28	GBS0	0.0	GBS0	28
27	GBS1	0.0	GBS1	27
26	GBS2	0.0	GBS2	26
25	GBS3	0.0	GBS3	25
24	GBS4	3.3	GBS4	24
23	GBS5	0.0	GBS5	23
22	GBS6	0.0	GBS6	22
21	GBS7	0.0	GBS7	21
20	GND_D	0.0	GND_D	20
19	BBS0	0.0	BBS0	19
18	BBS1	0.0	BBS1	18
17	BBS2	0.0	BBS2	17
16	BBS3	0.0	BBS3	16
15	BBS4	0.0	BBS4	15
14	BBS5	0.0	BBS5	14
13	BBS6	0.0	BBS6	13
12	BBS7	3.3	BBS7	12
11	GND_D	0.0	GND_D	11
10	HBS	3.3	HBS	10
9	GND_D	0.0	GND_D	9
8	VBS	3.3	VBS	8
7	GND_D	0.0	GND_D	7
6	NC	–	NC	6
5	GND_D	0.0	GND_D	5
4	CKBS	1.3	CKBS	4
3	GND_D	0.0	GND_D	3
2	SPDIF	0.3	SPDIF	2
1	GND_D	0.0	GND_D	1

B AV BOARD ASSY — **G** FRONT ASSY

CN8653 (AKM1201)		Voltage (V)	CN9502 (AKM1201)	
No.	Name		Name	No.
50	NC	–	NC	1
49	V+5V_A	5.0	V+5V_A	2
48	V+3VCOM	3.3	V+3VCOM	3
47	WE_ROM_B	0.0	WE_ROM_B	4
46	PC_V	0.0	PC_V	5
45	GND	0.0	GND	6
44	PC_H	0.0	PC_H	7
43	GND	0.0	GND	8
42	NC	–	NC	9
41	GND	0.0	GND	10
40	NC	–	NC	11
39	GND	0.0	GND	12
38	NC	–	NC	13
37	GND	0.0	GND	14
36	GND	0.0	GND	15
35	PC_RCH	4.4	PC_RCH	16
34	GND	0.0	GND	17
33	PC_LCH	4.4	PC_LCH	18
32	GND	0.0	GND	19
31	V4_R	4.4	V4_R	20
30	GND	0.0	GND	21
29	V4_L	4.4	V4_L	22
28	GND	0.0	GND	23
27	GND	0.0	GND	24
26	V4_V	3.9	V4_V	25
25	GND	0.0	GND	26
24	V4_S2	0.1	V4_S2	27
23	V4_SPLUG	4.9	V4_SPLUG	28
22	GND	0.0	GND	29
21	V4_C	4.4	V4_C	30
20	GND	0.0	GND	31
19	V4_Y	3.9	V4_Y	32
18	GND	0.0	GND	33
17	GND	0.0	GND	34
16	NC	–	NC	35
15	NC	–	NC	36
14	GND	0.0	GND	37
13	NC	–	NC	38
12	GND	0.0	GND	39
11	GND	0.0	GND	40
10	Y_COMP4	4.6	Y_COMP4	41
9	GND	0.0	GND	42
8	GND	0.0	GND	43
7	PB_COMP4	4.6	PB_COMP4	44
6	GND	0.0	GND	45
5	GND	0.0	GND	46
4	PR_COMP4	4.6	PR_COMP4	47
3	GND	0.0	GND	48
2	GND	0.0	GND	49
1	COMP_PLUG	0.0	COMP_PLUG	50

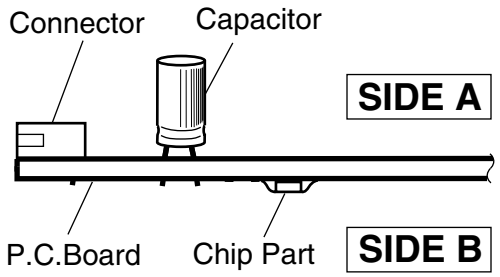
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

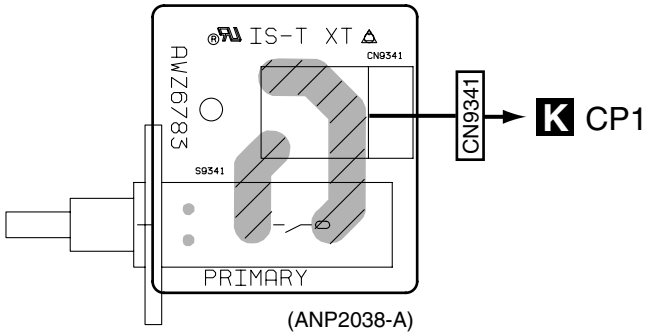
3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



4.1 AC SW and MDR ASSYS

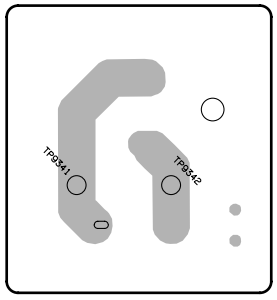
SIDE A **SIDE B**

J AC SW ASSY



(ANP2038-A)

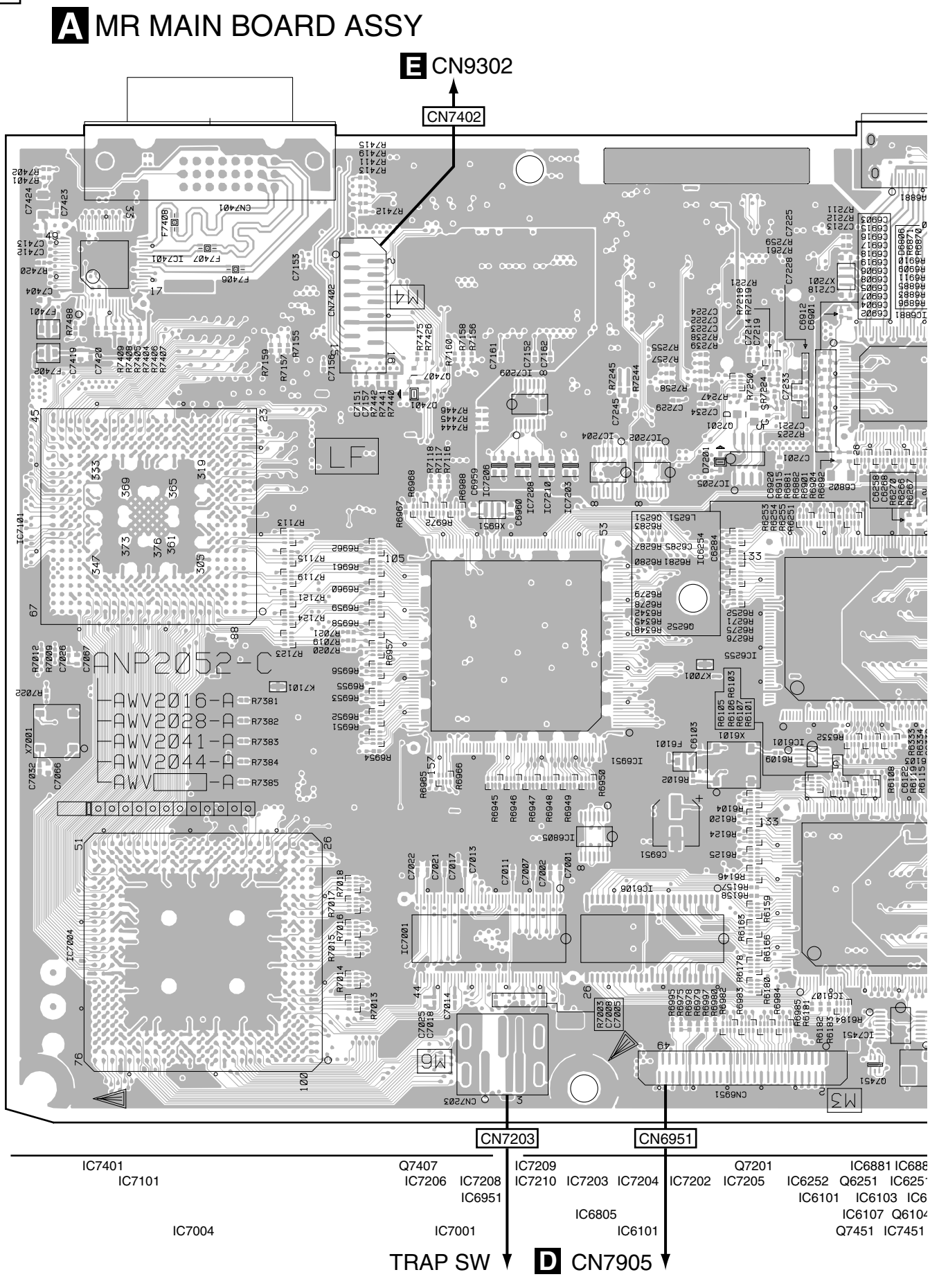
J AC SW ASSY



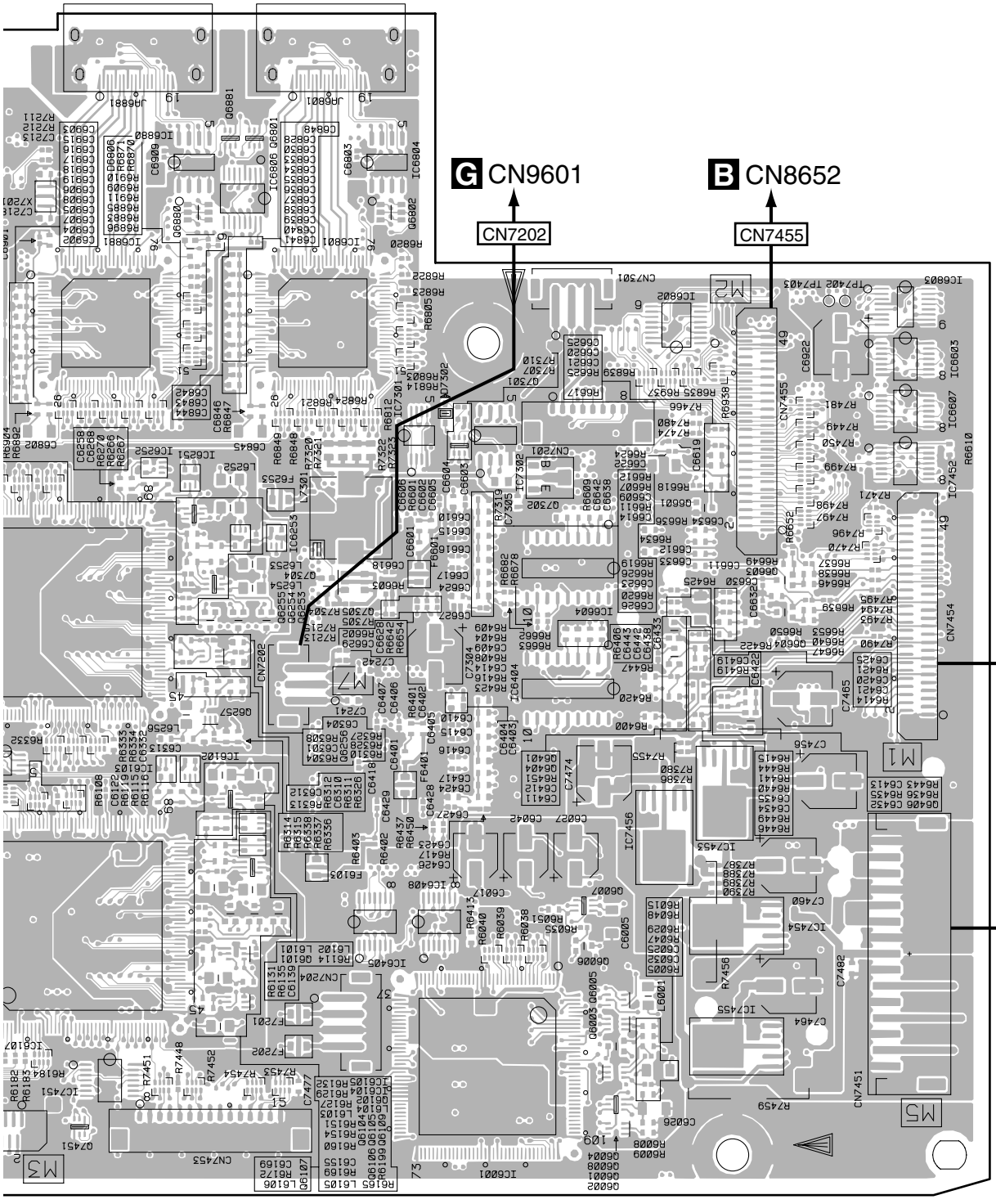
(ANP2038-A)

4.2 MR MAIN BOARD ASSY

SIDE A



SIDE A



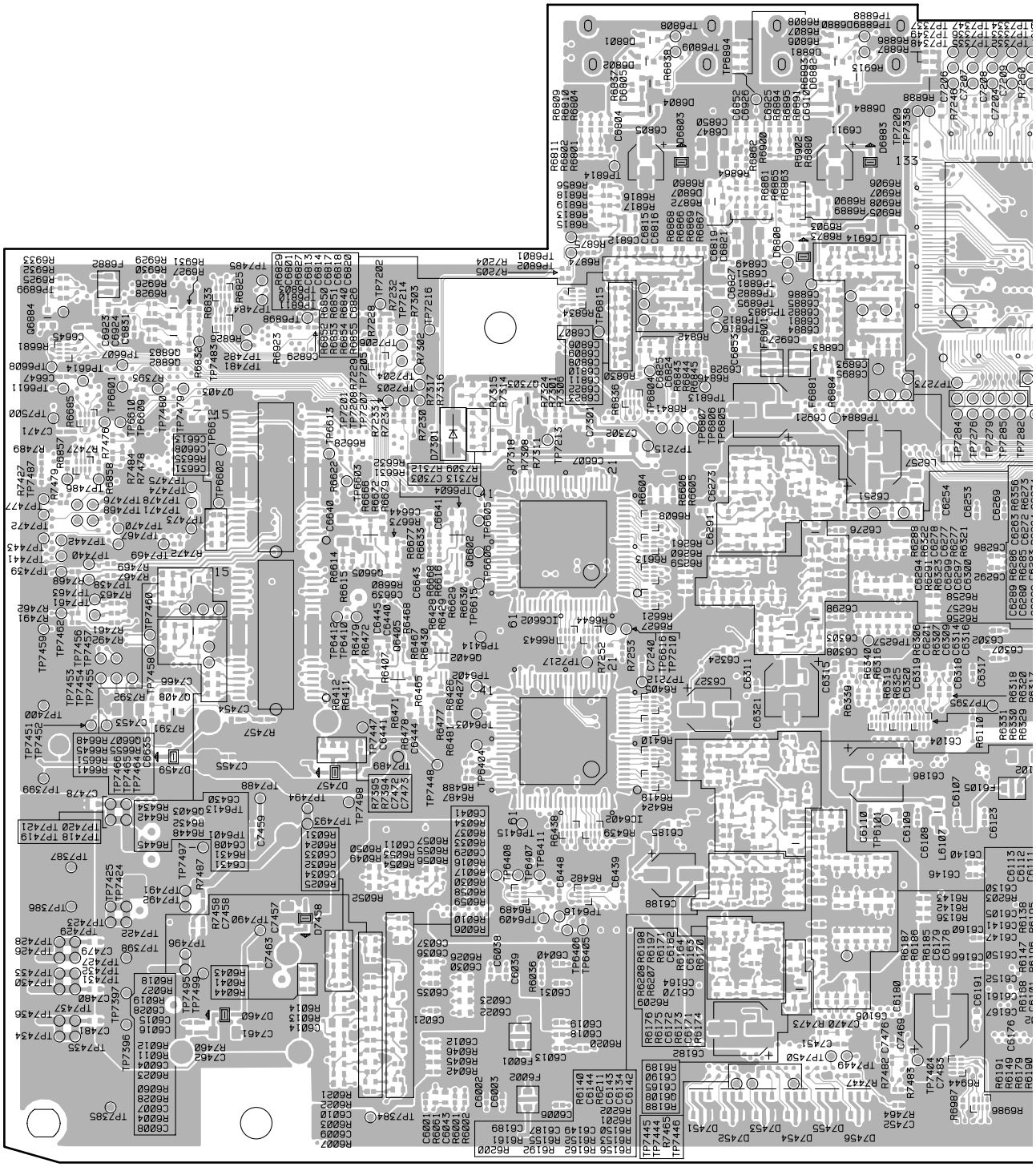
(ANP2052-C)

IC6881 IC6880 Q6881 Q6880 IC6806 Q6801 IC6801 Q6802 IC6804 Q7301 IC6802 IC6603 IC6803 IC6607
252 Q6251 IC6251 Q6255 Q6252 IC6254 IC6253 IC7301 Q7301 IC7302 Q7302 Q6601 Q6603 IC7452
6101 IC6103 IC6102 Q6257 Q6256 Q6254 Q6253 Q6201 Q7305 IC6404 IC6604 Q6401 Q6404 Q6406 Q6604
IC6107 Q6104 Q6101 Q6102 Q6105 Q6109 IC6405 IC6408 Q6006 Q6007 IC7456 IC7454 IC7453
Q7451 IC7451 Q6107 Q6106 IC6001 Q6003 Q6008 Q6005 Q6004 Q6001 Q6002 IC7455

A

SIDE B

A MR MAIN BOARD ASSY



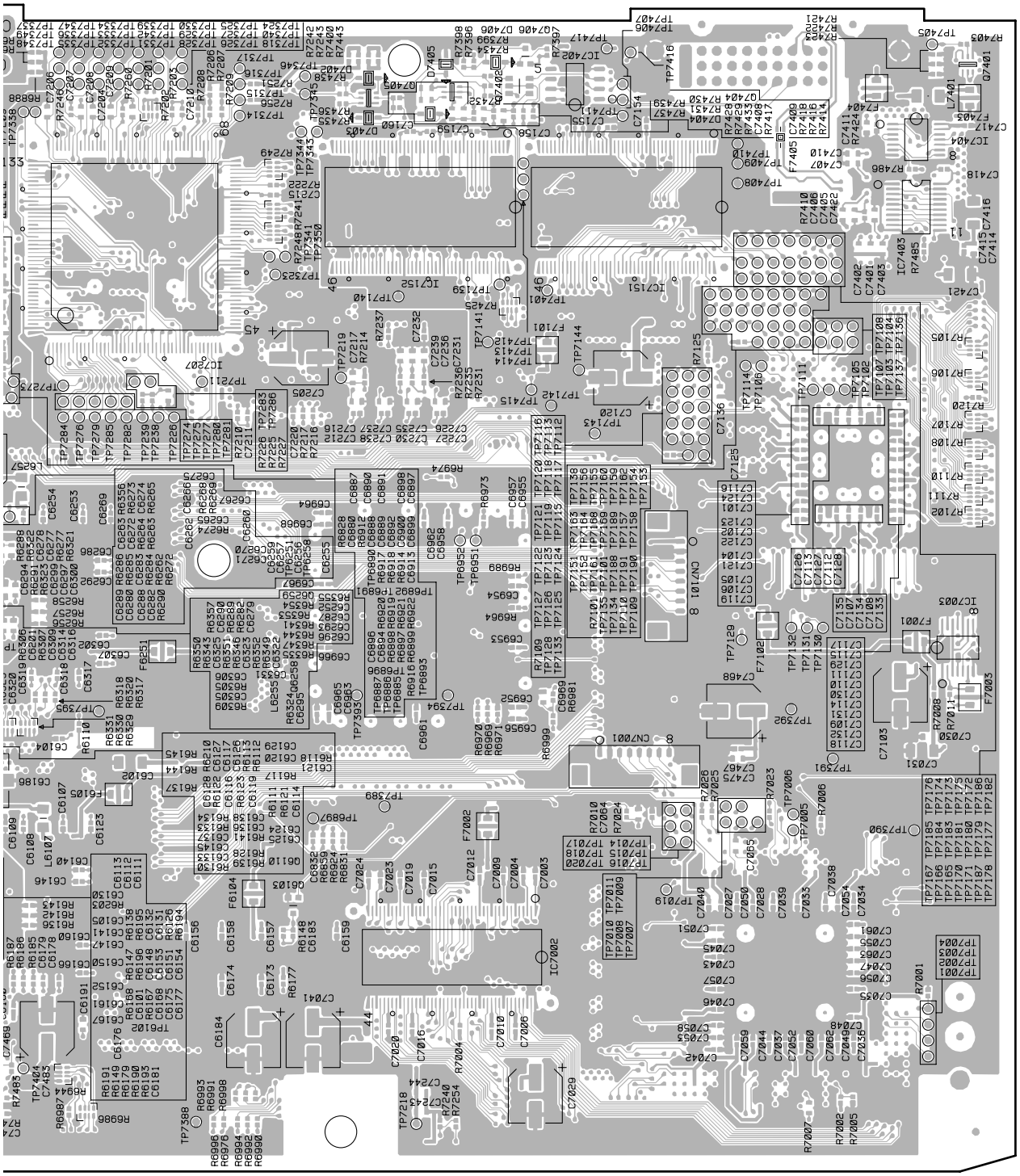
Q6884 Q6883 Q6882 IC7207

Q7408 Q7403 Q6607 Q6605 Q6405 Q6402 Q6602 IC6602 IC6402 Q6258 Q6259

Q6110 Q6108

A

SIDE B

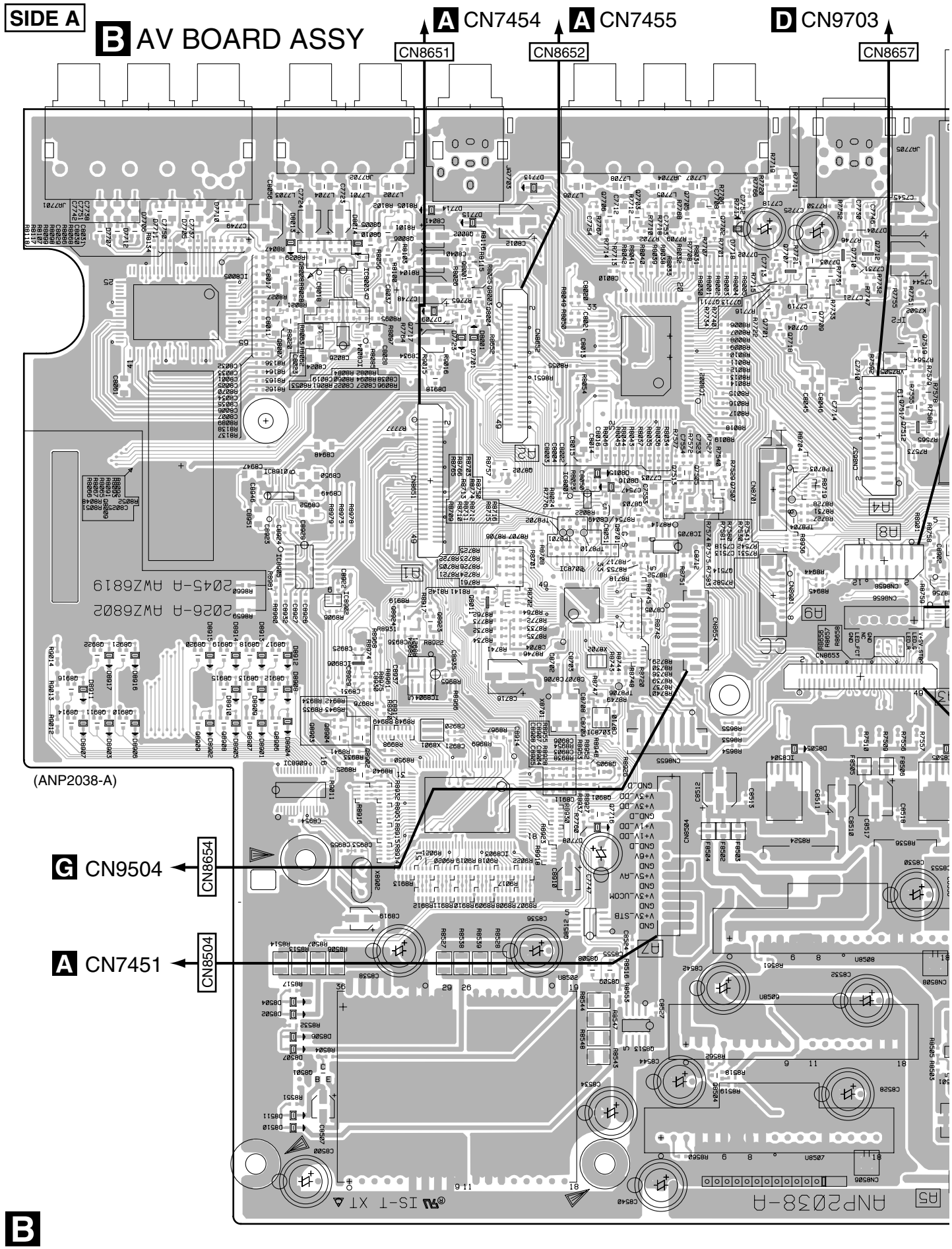


(ANP2052-C)

IC7207 Q7405 IC7152 Q7404 Q7406 Q7402 IC7151 IC7404 IC7403 Q7401 IC7003

Q6103 IC7002

4.3 AV BOARD and SR ASSYS

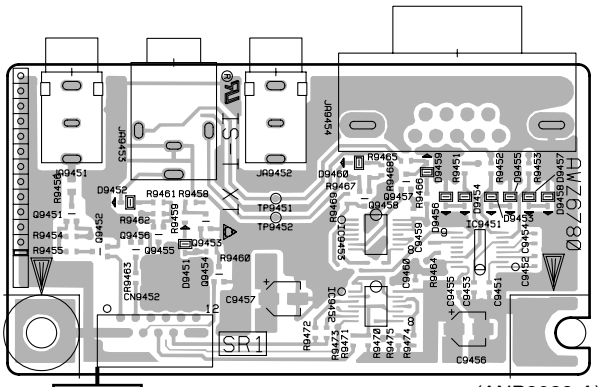


SIDE A

9703

CN8657

F SR ASSY



Q9451 Q9456 Q9455 Q9453 Q9454 IC9453 Q9457 IC9452 Q9458 IC9451

CN8658
Q7706 Q7703 Q8005 Q8002 Q8010 Q8006 Q8008 Q8001 IC8003 Q8003 IC8005 Q7717 Q8004 IC8004 Q7705 Q7702 Q7712 Q7710 Q7707 Q7711 Q7713 Q7719 Q7701 Q7709 Q7704 Q7718 Q7519 IC8002 VR7505 Q7517

CN8656
Q8702 IC8910 Q8703 IC8905 IC8902 Q8011 IC8702 Q8924 IC8901 Q8923 Q8920 Q8918 Q8922 Q8921 Q8919 Q7512 Q7516 Q7513 Q7505 Q7507 Q7514 Q7503 Q7506 VR7502 Q7518 VR7504 Q8701 VR7501 IC7502 IC8705 Q7515 VR7506 IC8704

→ H CN9651

CN8653
Q8917 IC8904 Q8915 Q8913 Q8916 Q8912 IC8703 Q8906 Q8914 Q8907 Q8911 Q8908 Q8903 Q8909 Q8910 IC8701 IC7503 Q7511 Q7531 Q7510 VR7503 IC7501 Q7509 Q7508 Q7501

→ G CN9502

CN8502
Q8904 Q8905 Q8902 Q8901 IC8909 IC8903 Q8716 IC8504 IC8505 Q8502

→ D CN9701

Q8503 IC8502 Q8512 Q8511

CN8503
Q8508 Q8509 Q8513 IC8501 Q8501 Q8504 IC8506 IC8503

→ D CN9707

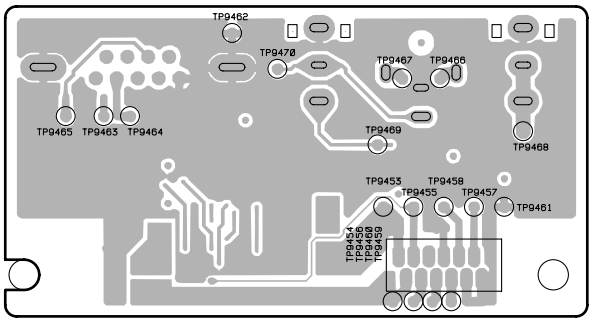
CN8501

→ K CP51

B F

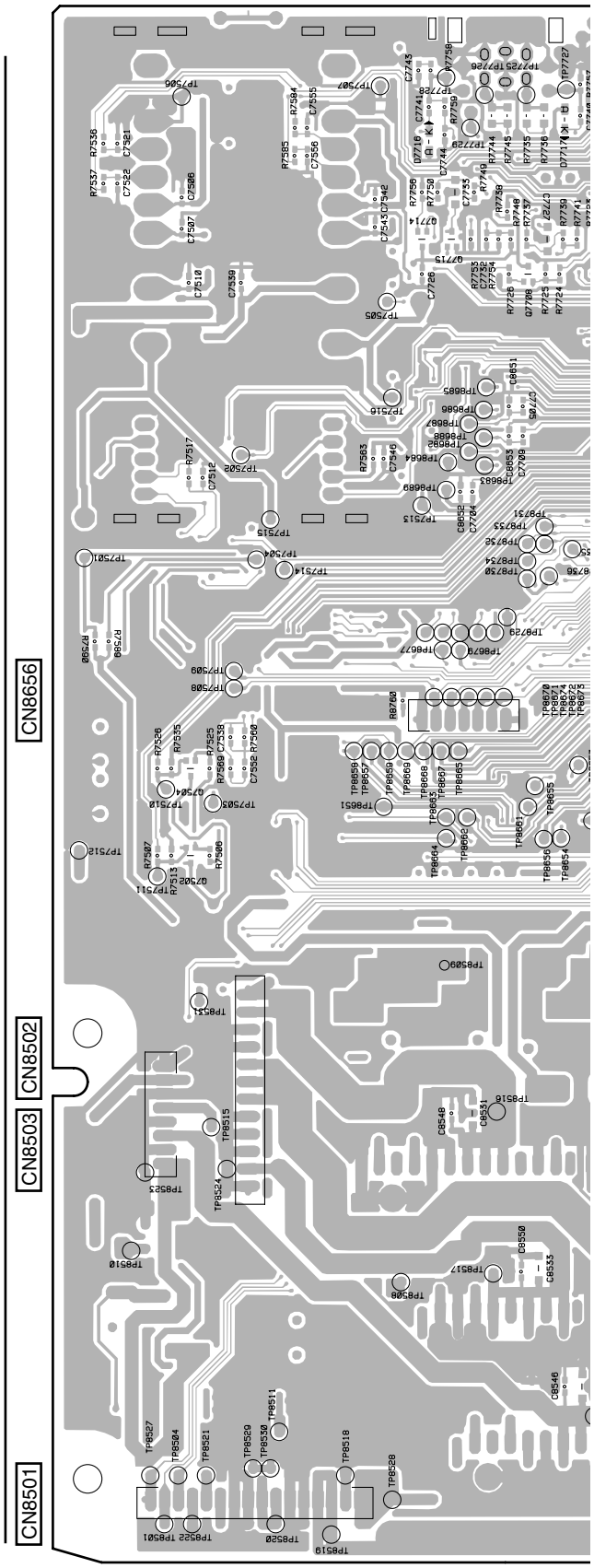
SIDE B

F SR ASSY



(ANP2038-A)

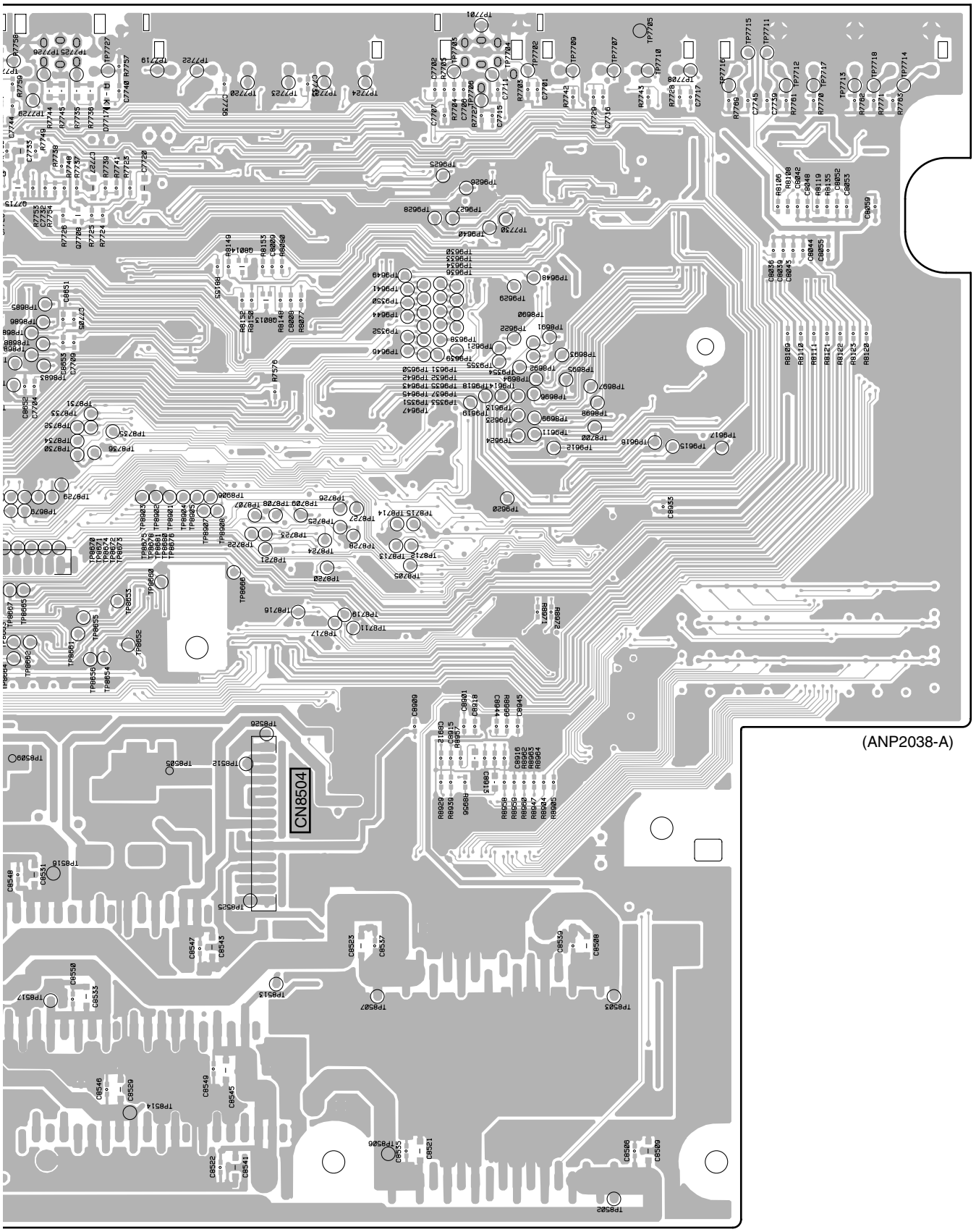
CN9452



B F

SIDE B

B AV BOARD ASSY



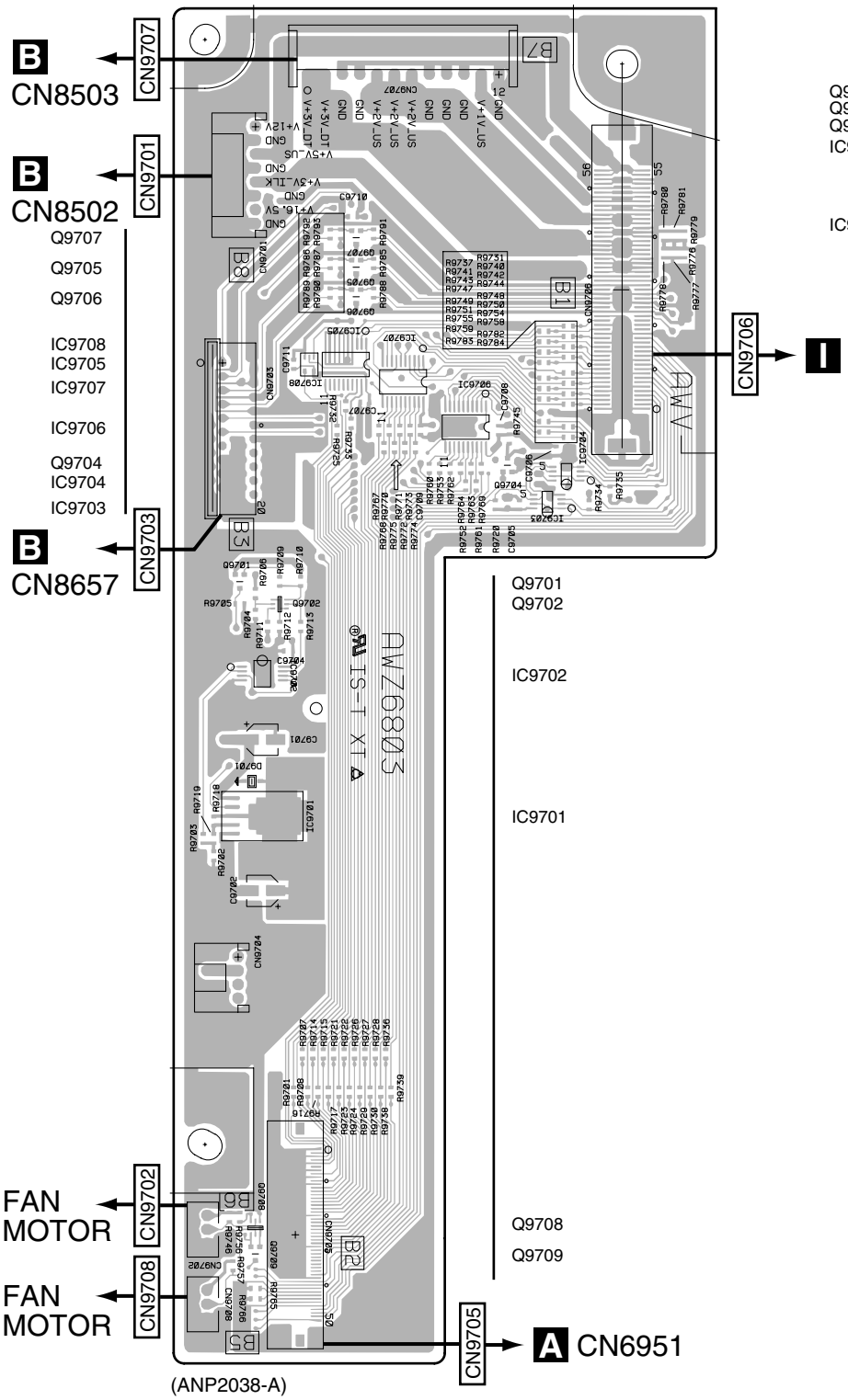
(ANP2038-A)

4.4 BRIDGE and MDR ASSYS

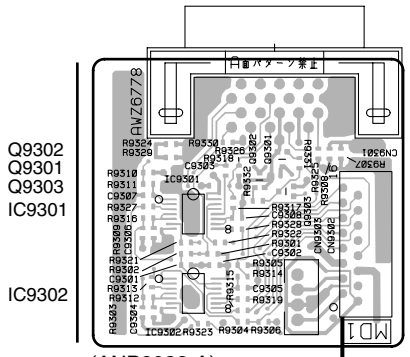
SIDE A

SIDE A

D BRIDGE ASSY



E MDR ASSY

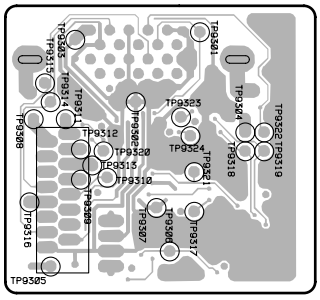


D **E**

D **E**

SIDE B

E MDR ASSY

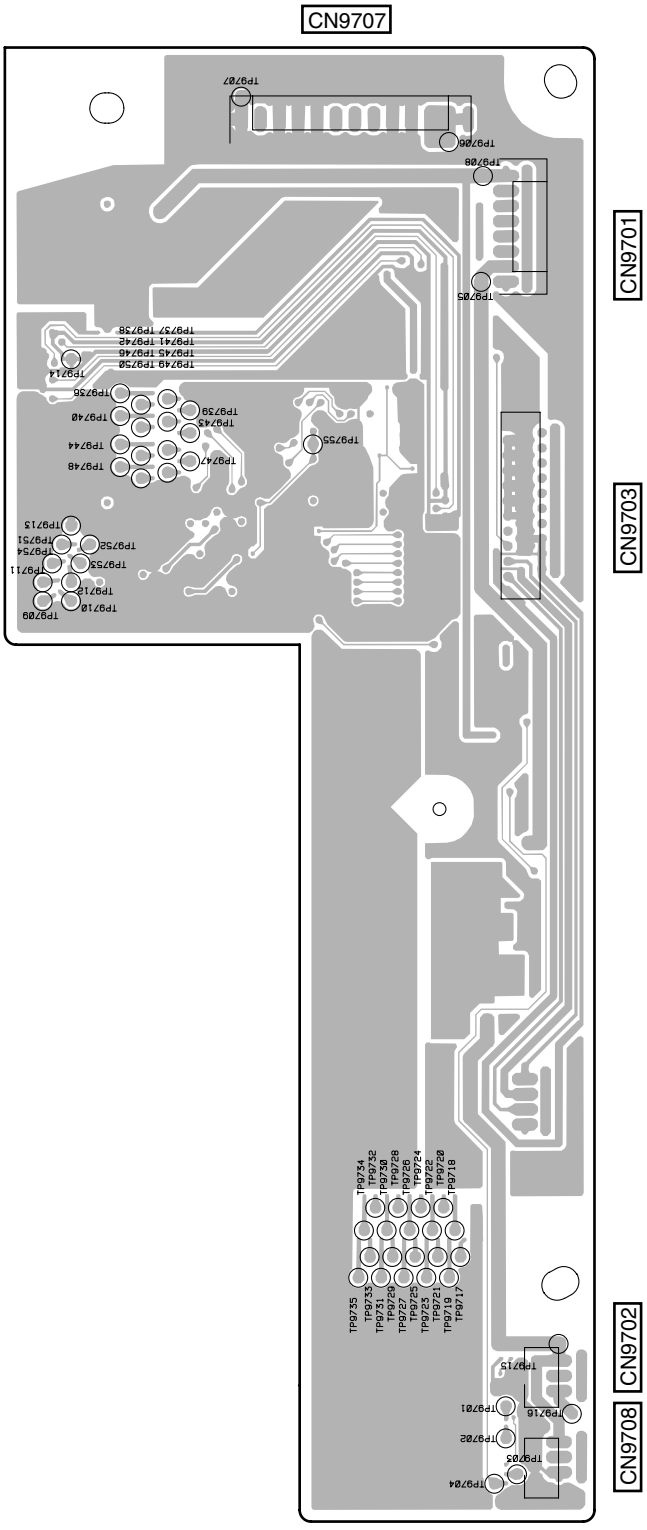


CN9302

(ANP2038-A)

SIDE B

D BRIDGE ASSY



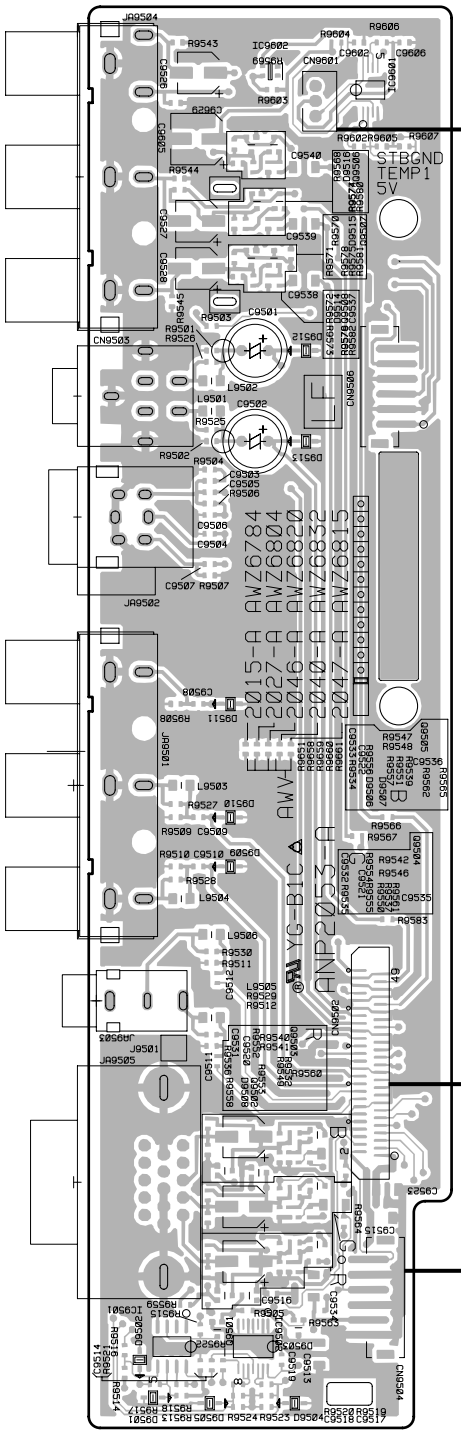
(ANP2038-A)

4.5 FRONT and LED ASSY

SIDE A

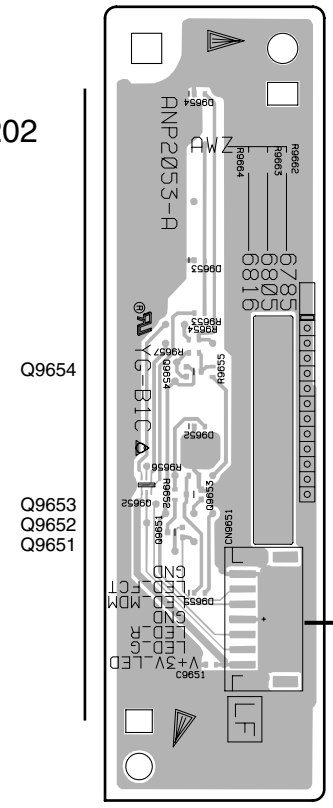
SIDE A

G FRONT ASSY



(ANP2053-A)

H LED ASSY



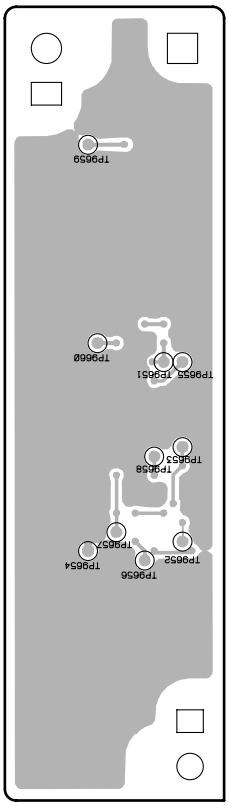
(ANP2053-A)

G **H**

G **H**

SIDE B

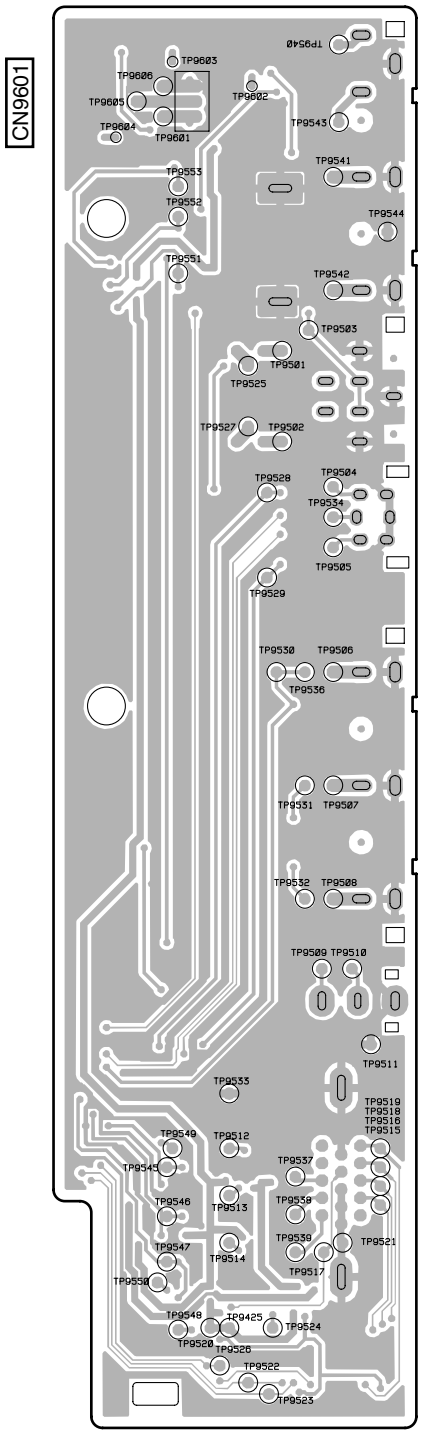
H LED ASSY



(ANP2053-A)

SIDE B

G FRONT ASSY



(ANP2053-A)

5. PCB PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *When ordering resistors, first convert resistance values into code form as shown in the following examples.*
Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56 x 10^1 → 561 ····· RD1/4PU 5 6 1 J
47k Ω → 47 x 10^3 → 473 ····· RD1/4PU 4 7 3 J
0.5 Ω → R50 ····· RN2H R 5 0 K
1 Ω → 1R0 ····· RS1P 1 R 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 x 10^1 → 5621 ····· RN1/4PC 5 6 2 1 F

• LIST OF ASSEMBLIES

Mark	Symbol and Description	PDP-R04U/ TUCK	PRO-R04U/ KUC
NSP	1..MR AV BOARD ASSY	AWV2026	AWV2045
	2..AV BOARD ASSY	AWZ6802	AWZ6819
	2..MDR ASSY	AWZ6778	AWZ6778
	2..SR ASSY	AWZ6780	AWZ6780
	2..BRIDGE ASSY	AWZ6803	AWZ6803
	2..AC SW ASSY	AWZ6783	AWZ6783
NSP	1..MR FUKUGOU BOARD ASSY	AWV2027	AWV2046
	2..FRONT ASSY	AWZ6804	AWZ6820
	2..LED ASSY	AWZ6805	AWZ6805
	1..MR MAIN BOARD ASSY	AWV2028	AWV2028
	1..DTV TUNER BOARD	AXY1064	AXY1064
⚠	1..POWER SUPPLY UNIT	AXY1065	AXY1065

• CONTRAST OF PCB ASSEMBLIES

B AV BOARD ASSY

AWZ6819 and AWZ6802 are constructed the same except for the following :

Mark	Symbol and Description	AWZ6802	AWZ6819
	R8652, R8659	RS1/16S0R0J	Not used
	R8660	Not used	RS1/16S0R0J
	JA7701 6P PIN JACK	AKB1297	AKB1298
	JA7702 4P PIN JACK	AKB1313	AKB1302
	JA7703 PINJACK+MINI DIN 4P	AKB1314	AKB1309
	JA7704 6P PIN JACK	AKB1295	AKB1312
	JA7705 2P 4 PIN MINI DIN (S)	AKP1234	AKP1235

G FRONT ASSY

AWZ6820 and AWZ6804 are constructed the same except for the following :

Mark	Symbol and Description	AWZ6804	AWZ6820
	R9658	RS1/16S0R0J	Not used
	R9659	Not used	RS1/16S0R0J
	JA9501 4P PIN JACK	AKB1303	AKB1304
	JA9502 4P MINI DIN (S)	AKP1238	AKP1239
	JA9504 3P PIN JACK	AKB1305	AKB1306

• PCB PARTS LIST (PDP-R04U)

Mark	No.	Description	Part No.

A MR MAIN BOARD ASSY

[MICHAEL BLOCK]

SEMICONDUCTORS

IC6107,IC6255	PD0278A
IC6101	TC7W126FU
Q6108,Q6258	2SA1586
Q6101,Q6102,Q6251,Q6252	HN1A01FU
Q6106,Q6107,Q6256,Q6257	HN1B04FU

COILS AND FILTERS

F6101,F6103,F6105,F6251,F6253 EMI FILTER	ATF1194
L6107,L6257	LCTAW220J2520
L6101,L6103,L6105,L6106,L6251	LCTAW6R8J2520
L6253,L6255,L6256	LCTAW6R8J2520

CAPACITORS

C6188,C6327	ACH1357
C6186 (100uF/6.3V)	ACH1364
C6182,C6251,C6321 (100uF/6.3V)	ACH1396
C6126,C6142,C6163,C6164	CCSRCH330J50
C6171,C6172,C6272,C6288	CCSRCH330J50
C6305,C6306,C6312,C6313	CCSRCH330J50
C6127,C6143,C6273,C6289	CCSRCH680J50
C6151,C6297	CKSQYB225K10
C6112,C6114,C6258,C6260	CKSRYB102K50
C6119,C6136,C6153,C6154,C6168	CKSRYB104K16
C6177,C6185,C6265,C6282	CKSRYB104K16
C6299,C6300,C6309,C6316,C6324	CKSRYB104K16
C6101,C6155,C6169,C6175,C6190	CKSRYB105K10
C6201,C6295,C6301,C6310,C6314	CKSRYB105K10
C6103,C6104,C6107-C6111,C6113	CKSSYF104Z16
C6116,C6123-C6125,C6130-C613	3CKSSYF104Z16
C6140,C6141,C6146-C6148,C6150	CKSSYF104Z16
C6152,C6160-C6162,C6165-C6167	CKSSYF104Z16
C6170,C6176,C6178-C6181	CKSSYF104Z16
C6253-C6257,C6259,C6262	CKSSYF104Z16
C6269-C6271,C6276-C6279	CKSSYF104Z16
C6286,C6287,C6292-C6294,C6296	CKSSYF104Z16
C6298,C6302-C6304,C6307,C6308	CKSSYF104Z16
C6311,C6315,C6317-C6320,C6331	CKSSYF104Z16
C6102 (10uF/16V)	DCH1165

RESISTORS

R6101,R6104-R6106,R6120	RAB4CQ100J
R6124,R6125,R6251-R6254,R6271	RAB4CQ100J
R6275,R6276	RAB4CQ100J
R6329-R6331	RAB4CQ103J
R6194-R6196,R6321-R6323	RS1/16S1000F
R6147,R6291	RS1/16S1301F
R6126,R6138,R6277,R6288	RS1/16S2701F
R6167,R6168,R6306,R6307	RS1/16S8201F
R6102,R6103,R6107-R6111,R6114	RS1/16SS###J
R6121,R6127,R6130,R6136,R6137	RS1/16SS###J
R6139,R6142-R6145,R6164,R6173	RS1/16SS###J
R6179,R6188,R6190,R6191,R6193	RS1/16SS###J
R6209,R6255-R6262,R6265,R6272	RS1/16SS###J
R6278,R6279,R6282,R6304,R6312	RS1/16SS###J
R6316,R6319,R6324,R6325,R6328	RS1/16SS###J
R6338,R6339	RS1/16SS###J
Other Resistors	RS1/16S###J

Mark	No.	Description	Part No.

OTHERS

X6101 CRYSTAL OSCILLATOR (27MHz)	ASS1175

[AD BLOCK]

SEMICONDUCTORS

IC6402,IC6602	AD9883AKST-110
IC6404,IC6604	BA7078AF
IC6401,IC6601	SM5301BS
IC6405,IC6408,IC6603,IC6607	TC74VHC126FT
Q6402,Q6405,Q6602,Q6605	HN1B04FU
Q6401,Q6601	RN1303

COILS AND FILTERS

F6401,F6601 EMI FILTER	ATF1194

CAPACITORS

C6445,C6644	CCSRCH221J50
C6438,C6638	CKSRYB103K50
C6404,C6424,C6604,C6624	CKSRYB104K16
C6408,C6411,C6412,C6431	CKSRYB105K10
C6434,C6435,C6608,C6611,C6612	CKSRYB105K10
C6631,C6633,C6634	CKSRYB105K10
C6421,C6621	CKSRYB105K6R3
C6442,C6641	CKSRYB223K50
C6409,C6414,C6423,C6609,C6614	CKSRYB473K16
C6623	CKSRYB473K16
C6443,C6642	CKSRYB474K10
C6402,C6602	CKSRYB822K50
C6401,C6601	CKSRYB823K16
C6405-C6407,C6410,C6413	CKSSYF104Z16
C6415-C6420,C6425,C6427-C6429	CKSSYF104Z16
C6439,C6440,C6444,C6448	CKSSYF104Z16
C6605-C6607,C6610,C6613	CKSSYF104Z16
C6615-C6620,C6625,C6627-C6629	CKSSYF104Z16
C6639,C6643,C6645,C6647	CKSSYF104Z16
C6422,C6441,C6622,C6640 (10uF/16V)	DCH1165

RESISTORS

R6482,R6489,R6681,R6685	RAB4CQ101J
R6405,R6410,R6418,R6424	RAB4CQ330J
R6438,R6439,R6608,R6613,R6621	RAB4CQ330J
R6627,R6643,R6644	RAB4CQ330J
R6409,R6416,R6417,R6612	RS1/16S1000F
R6619,R6620	RS1/16S1000F
R6422,R6625	RS1/16S1101F
R6404,R6408,R6423,R6607,R6611	RS1/16S1500F
R6626	RS1/16S1500F
R6401,R6601	RS1/16S2701F
R6406,R6413,R6414,R6426,R6428	RS1/16S###J
R6429,R6465,R6478,R6479,R6609	RS1/16S###J
R6610,R6617,R6629,R6631,R6632	RS1/16S###J
R6666,R6673,R6679,R6680	RS1/16S###J
Other Resistors	RS1/16SS###J

[HDMI RX BLOCK]

SEMICONDUCTORS

IC6804,IC6880	24LC02B(I)SN
IC6803	PCM1742KE
IC6801,IC6881	SII9993CTG100
IC6806	TC74HC4538AFT
IC6802	TC74VHC157FT

Mark No.	Description	Part No.
	Q6884	RN1303
	Q6801,Q6881	RN1902
	Q6802,Q6880	SM6K2
	D6801,D6802,D6880,D6881	1SS302
	D6804,D6806,D6807,D6884	DAN202U
	D6803,D6883	UDZS6.8B
	COILS AND FILTERS	
	F6801,F6881,F6882 EMI FILTER	ATF1194
	CAPACITORS	
	C6805,C6911 (22uF/6.3V)	ACH1362
	C6921,C6922 (100uF/6.3V)	ACH1364
	C6801,C6806,C6808,C6810	CCSRCH101J50
	C6813,C6814,C6817,C6818,C6820	CCSRCH101J50
	C6823,C6824,C6830,C6834,C6836	CCSRCH101J50
	C6838,C6839,C6841,C6844,C6880	CCSRCH101J50
	C6882,C6884,C6886,C6888,C6889	CCSRCH101J50
	C6892,C6895,C6896,C6899-C6902	CCSRCH101J50
	C6905,C6906,C6915,C6917,C6919	CCSRCH101J50
	C6826,C6913	CKSRYF103Z50
	C6846,C6920	CKSRYF473Z50
	C6803,C6804,C6807,C6809	CKSSYF104Z16
	C6811,C6812,C6815,C6816,C6819	CKSSYF104Z16
	C6821,C6822,C6825,C6828,C6829	CKSSYF104Z16
	C6831,C6833,C6835,C6837,C6840	CKSSYF104Z16
	C6842,C6843,C6848,C6852,C6881	CKSSYF104Z16
	C6883,C6885,C6887,C6890,C6891	CKSSYF104Z16
	C6893,C6894,C6897,C6898	CKSSYF104Z16
	C6903,C6904,C6907-C6910,C6912	CKSSYF104Z16
	C6916,C6918,C6923-C6926	CKSSYF104Z16
	C6802,C6827,C6845,C6847	DCH1165
	C6849-C6851,C6914 (10uF/16V)	DCH1165
	RESISTORS	
	R6825,R6849,R6881-R6883,R6885	RAB4CQ101J
	R6892,R6896,R6901,R6904	RAB4CQ101J
	R6848	RAB4CQ220J
	R6803,R6805,R6812,R6814,R6821	RAB4CQ470J
	R6824	RAB4CQ470J
	R6840,R6914	RS1/16S1500F
	R6817,R6889	RS1/16S3900F
	R6847,R6915	RS1/16S3901F
	R6850-R6855,R6917-R6922	RS1/16S75R0F
	R6860,R6872	RS1/16S###J
	Other Resistors	RS1/16SS###J
	OTHERS	
	JA6801,JA6881 HDMI CONNECTOR	AKP1232
	[ROZ BLOCK]	
	SEMICONDUCTORS	
	IC6951	PD6435A
	CAPACITORS	
	C6951 (100uF/6.3V)	ACH1364
	C6959,C6960	CCSRCH150J50
	C6952-C6954,C6956-C6958	CKSSYF104Z16
	C6961,C6962,C6964-C6968	CKSSYF104Z16
	RESISTORS	
	R6951-R6953,R6956-R6962,R6966	RAB4CQ100J
	R6968,R6972	RAB4CQ100J
	R6945,R6946,R6988	RAB4CQ103J
	Other Resistors	RS1/16SS###J
	OTHERS	
	X6951 CERAMIC RESONATOR	ASS1169
	[CELIA BLOCK]	
	SEMICONDUCTORS	
	IC7001,IC7002	HY57V643220CT-7
	IC7004	PE5362A
	IC7003	TC74LCX125FT
	COILS AND FILTERS	
	F7001,F7002	ATF1194
	CAPACITORS	
	C7029,C7041 (100uF/6.3V)	ACH1364
	C7064	CCSRCH100D50
	C7025,C7066,C7067	CCSRCH221J50
	C7001-C7024,C7026-C7028	CKSSYF104Z16
	C7032-C7040,C7042-C7063	CKSSYF104Z16
	C7031 (10uF/16V)	DCH1165
	RESISTORS	
	R7013-R7018	RAB4CQ220J
	R7007	RS1/16S###J
	Other Resistors	RS1/16SS###J
	OTHERS	
	X7001 CRYSTAL OSCILLATOR (85MHz)	ASS1174
	[MIKE BLOCK]	
	SEMICONDUCTORS	
	IC7152	MBM29PL3200BE70PFV
	IC7101	PD5855A
	COILS AND FILTERS	
	F7101,F7102 EMI FILTER	ATF1194
	CAPACITORS	
	C7103,C7120 (100uF/6.3V)	ACH1364
	C7101,C7102,C7104-C7119	CKSSYF104Z16
	C7121-C7135,C7158,C7160-C7162	CKSSYF104Z16
	RESISTORS	
	R7113,R7115,R7119,R7121	RAB4CQ101J
	R7123,R7124	RAB4CQ101J
	R7102,R7105-R7108,R7110,R7111	RAB4CQ330J
	Other Resistors	RS1/16SS###J
	[MAIN UCOM BLOCK]	
	SEMICONDUCTORS	
	IC7205	24LC128(I)SN
	IC7207	MB91F355APMTGE1
	IC7210	PST3612UR
	IC7203,IC7206	PST3628UR
	IC7209	TC74VHC08FT
	IC7202	TC74VHC125FT
	Q7201	2SJ461A
	D7201	1SS355
	CAPACITORS	
	C7205 (100uF/6.3V)	ACH1364
	C7213,C7218	CCSRCH7R0D50
	C7201	CKSRYB103K50

Mark No.	Description	Part No.
C7226,C7237		CKSRYB104K16
C7216		CKSRYB472K50
C7217		CKSRYF103Z50
C7209-C7212,C7214,C7215,C7219		CKSSYF104Z16
C7221-C7225,C7227-C7229		CKSSYF104Z16
C7232-C7234,C7238,C7240		CKSSYF104Z16
RESISTORS		
R7221,R7229,R7241,R7248-R7250		RAB4CQ101J
R7201		RAB4CQ472J
R7224,R7227,R7252		RS1/16S###J
Other Resistors		RS1/16SS###J
OTHERS		
CN7203	3P CONNECTER	AKM1213
CN7201	PLUG 8-P	AKM1225
CN7202	CONNECTOR	AKM1242
X7201	CERAMIC RESONATOR	ASS1170
[MR IF BLOCK]		
SEMICONDUCTORS		
IC7456		PQ015YZ01ZP
IC7454		PQ050DZ01ZPH
IC7453		PQ3DZ13
IC7401		SII170BCLG64
IC7404		TC74VCX08FT
IC7403		TC74VCX574FT
IC7451		TC74VHC08FT
Q7406		2SA1586
Q7405		HN1C01FU
Q7403,Q7407,Q7408		RN1303
Q7451		RN1901
Q7401		RN1902
Q7404		RN2901
D7401-D7406,D7457		1SS355
COILS AND FILTERS		
F7401-F7404	EMI FILTER	ATF1194
L7401 (3.3uH)		ATH1132
CAPACITORS		
C7474 (330uF/6.3V)		ACH1365
C7456,C7460,C7465,C7468 (100uF/6.3V)		ACH1396
C7401,C7402		CCSRCH100D50
C7475,C7477		CCSRCH221J50
C7403,C7404,C7406,C7407		CCSRCH820J50
C7410,C7411,C7413,C7414,C7419		CCSRCH820J50
C7405,C7412,C7415,C7417,C7418		CKSSYF104Z16
C7420,C7423,C7451,C7452		CKSSYF104Z16
C7454,C7455,C7458,C7459		CKSSYF104Z16
C7466,C7467,C7469,C7473,C7476		CKSSYF104Z16
C7416,C7421,C7424,C7457 (10uF/16V)		DCH1165
RESISTORS		
R7425,R7449-R7452,R7454		RAB4CQ101J
R7496-R7499		RAB4CQ101J
R7453		RAB4CQ103J
R7394		RS1/16S1001F
R7395,R7410		RS1/16S5100F
R7456		RS2LMFR82J
R7428-R7431		RS1/16S###J
Other Resistors		RS1/16SS###J

Mark No.	Description	Part No.
OTHERS		
CN7454,CN7455	50P CONNECTER	AKM1201
CN7453	PLUG 15-P	AKM1232
CN7402	16P FFC CONNECTOR	AKM1234
CN7451	CONNECTOR	AKM1269
[REGULATOR BLOCK]		
SEMICONDUCTORS		
IC6106		HY57V161610DTC-8
IC7204		TC74VHC125FT
IC7452		TC74VHC126FT
Q6104,Q6105,Q6109,Q6253-Q6255		2SA1586
Q6103		RN1303
COILS AND FILTERS		
F6104	EMI FILTER	ATF1194
F7405-F7408	EMI FILTER	ATF1209
CAPACITORS		
C6184 (100uF/6.3V)		ACH1364
C7483 (330uF/6.3V)		ACH1365
C6149,C6156-C6159,C6173,C6174		CKSSYF104Z16
C6183,C6187,C6189,C6322,C6323		CKSSYF104Z16
C6325,C7220,C7471		CKSSYF104Z16
C7453 (10uF/16V)		DCH1165
RESISTORS		
R6332-R6334		RAB4CQ0R0J
R7477,R7481		RAB4CQ101J
R6982-R6986		RAB4CQ220J
R6146,R6159,R6163,R6166,R6178		RAB4CQ330J
R6180,R6184		RAB4CQ330J
R7459		RS2LMF3R9J
Other Resistors		RS1/16SS###J
OTHERS		
CN6951	50P CONNECTER	AKM1201
CN7401	DVI SOCKET (24P)	AKP1250

B AV BOARD ASSY

[TUNER BLOCK]		
SEMICONDUCTORS		
IC7503		CXA2064M
IC7502		TC74HC4066AFT
Q7505,Q7513		2SA1586
Q7501,Q7502,Q7504,Q7506-Q7511		2SC4116
Q7514,Q7516-Q7519		2SC4116
Q7515		DTA124EUA
Q7503,Q7512		HN1A01FU
D7501		UDZS33B
CAPACITORS		
C7527,C7529,C7533,C7535,C7536		ACG1107
C7550 (4.7uF/10V)		ACG1107
C7501 (10uF/50V)		ACH1387
C7508,C7509,C7544,C7545,C7548 (100uF/16V)		ACH1394
C7530		ACH1408
C7528		ACH1409
C7502,C7520,C7524		CKSRYB102K50
C7516		CKSRYB103K50
C7531,C7537		CKSRYB105K10
C7552		CKSRYB123K50

Mark No.	Description	Part No.
	C7532	CKSRYB272K50
	C7523,C7554	CKSRYB332K50
	C7538	CKSRYB562K50
	C7510,C7519,C7539,C7549	CKSRYF104Z50
	C7526	CKSRYF473Z50
	C7517,C7518,C7534,C7551,C7553	DCH1165
	C7557,C7558 (10uF/16V)	DCH1165
	RESISTORS	
	R7514	RD1/2LMF101J
	R7545,R7546	RS1/16S1002F
	R7559	RS1/16S6802F
	VR7501,VR7505 (470)	CCP1388
	VR7502-VR7504 (4.7K)	CCP1394
	VR7506 (10k)	CCP1396
	Other Resistors	RS1/16S###J
	OTHERS	
	U7501, U7502 TV FRONTEND	VXF1022
	[AV IO BLOCK]	
	SEMICONDUCTORS	
	Q7705,Q7706,Q7716,Q7717	2SA1586
	Q7702,Q7703,Q7708,Q7709,Q7711	2SC4116
	Q7713-Q7715	2SC4116
	Q7701	DTA124EUA
	Q7704,Q7718	DTC124EUA
	Q7707,Q7710,Q7712	HN1A01FU
	D7701	1SS301
	D7702-D7707,D7710-D7712	1SS302
	D7708,D7709	1SS355
	D7713-D7718	UDZS9.1B
	COILS AND FILTERS	
	L7701-L7706	LCTAW1R0J2520
	L7707,L7708	LCTAW560J2520
	CAPACITORS	
	C7748 (22uF/16V)	ACH1370
	C7723,C7724 (1.0uF/50V)	ACH1383
	C7718,C7725,C7747	CEHAT471M10
	C7702,C7707,C7711,C7739,C7741	CKSRYB103K50
	C7744-C7746	CKSRYB103K50
	C7701,C7703-C7705,C7709	CKSRYB105K10
	C7715-C7717,C7730,C7732,C7740	CKSRYB105K10
	C7752-C7754	CKSRYB105K10
	C7706,C7743	CKSRYB473K16
	C7713,C7721,C7726	CKSRYF104Z50
	C7708,C7710,C7712,C7714	DCH1165
	C7719,C7720,C7727,C7731,C7733	DCH1165
	C7737,C7738,C7742,C7749-C7751 (10uF/16V)	DCH1165
	RESISTORS	
	R7711,R7719,R7735,R7736	RS1/10S151J
	R7744,R7745	RS1/10S151J
	Other Resistors	RS1/16S###J
	OTHERS	
	JA7704 6P PIN JACK	AKB1295
	JA7701 6P PIN JACK	AKB1297
	JA7702 4P PIN JACK	AKB1313
	JA7703 PINJACK+MINI DIN 4P	AKB1314
	JA7705 2P 4PIN MINIDIN(S)	AKP1234

Mark No.	Description	Part No.
	[AV SW BLOCK]	
	SEMICONDUCTORS	
	IC8005	AN15852A
	IC8002	CXA2069Q
	IC8004	NJM12904V
	IC8003	TC4052BFT
	IC8001	TC7WH123FU
	Q8005,Q8006,Q8013,Q8014	2SA1586
	Q8001,Q8002,Q8007-Q8010	2SC4116
	Q8003	DTA124EUA
	Q8004	DTC124EUA
	Q8011	HN1C01FU
	D8001,D8015,D8016	1SS355
	D8013,D8014	UDZS9.1B
	CAPACITORS	
	C8012,C8056 (100uF/16V)	ACH1394
	C8040,C8041 (10uF/16V)	ACH1399
	C8022,C8027	CCSRCH181J50
	C8019,C8038	CCSRCH681J50
	C8002-C8004,C8008,C8009,C8016	CKSRYB105K10
	C8050	CKSRYB105K10
	C8001,C8005-C8007,C8010,C8013	CKSRYF104Z50
	C8015,C8025,C8026,C8031-C8036	CKSRYF104Z50
	C8039,C8042-C8044,C8048,C8049	CKSRYF104Z50
	C8052,C8053,C8055,C8059	CKSRYF104Z50
	C8011,C8014,C8017,C8018	DCH1165
	C8023,C8024,C8028,C8037	DCH1165
	C8045,C8046,C8051,C8061(10uF/16V)	DCH1165
	RESISTORS	
	All Resistors	RS1/16S###J
	[AV REG BLOCK]	
	SEMICONDUCTORS	
	IC8506	BD6522F
	IC8501,IC8503	M5291FP
	IC8505	PQ05DZ11
	IC8504	PQ09DZ11
	IC8502	PQ3DZ13
	Q8502,Q8504	2SC4116
	Q8503,Q8508	DTA124EUA
	Q8509	DTC124EUA
	Q8511	TPC6104
	Q8512,Q8513	TPC8003
	D8501,D8504-D8506,D8508,D8509	1SS355
	D8511,D8512	1SS355
	D8510	HZU2.2B
	D8507	UDZS3.6B
	D8502	UDZS5.1B
	COILS AND FILTERS	
	F8502-F8506 EMI FILTER	ATF1194
	L8501,L8502	ATH1125
	CAPACITORS	
	C8501,C8503,C8517,C8554 (100uF/6.3V)	ACH1364 ACH1364
	C8510,C8515,C8552 (22uF/16V)	ACH1370
	C8505,C8512 (100uF/16V)	ACH1394
	C8507,C8526 (10uF/16V)	ACH1399
	C8504,C8519	CCSRCH221J50
	C8502,C8514	CCSRCH821J50

Mark No.	Description	Part No.
	C8520	CEHAT101M50
	C8500,C8528,C8530,C8532,C8534	CEHAZL471M16
	C8536,C8538,C8540,C8542,C8544	CEHAZL471M16
	C8506,C8511,C8513,C8516,C8518	CKSRYB103K50
	C8522,C8524,C8525,C8527,C8535	CKSRYB103K50
	C8537,C8539,C8546-C8551,C8553	CKSRYB103K50
	C8508,C8509,C8521,C8523,C8529	DCH1165
	C8531,C8533,C8541,C8543,C8545 (10uF/16V)	DCH1165
RESISTORS		
	R8502,R8511	ACN1164
	R8506,R8507,R8513,R8514	ACN1188
	R8527,R8528,R8538,R8539	ACN1188
	R8543,R8544,R8547,R8548	ACN1188
	R8503	RS1/16S1001F
	R8512	RS1/16S1101F
	R8505	RS1/16S3301F
	R8523	RS1/16S3302F
	R8536	RS1LMF1R0J
	R8508	RS1LMF8R2J
	R8524	RS2LMF3R3J
	Other Resistors	RS1/16S###J
OTHERS		
	CN8503 CONNECTOR	B12B-EH
	CN8504 PLUG(15P)	KM200NA15
	U8502 DD CON UNIT	AXY1066
	U8507, U8508 DD CON UNIT	AXY1070
	U8509 DD CON UNIT	AXY1071
[BOARD IF BLOCK]		
CAPACITORS		
	C8651,C8652	CCSRCH151J50
RESISTORS		
	All Resistors	RS1/16S###J
OTHERS		
	CN8651-CN8653 50P CONNECTER	AKM1201
	CN8658 12P FFC CONNECTOR	AKM1233
	CN8657 20P FFC CONNECTOR	AKM1235
	CN8654 CONNECTOR	B6B-PH-SM3
[UIF UCOM BLOCK]		
SEMICONDUCTORS		
	IC8705	24LC01B
	IC8702	HD64F3687FP
	IC8703	PST9231N
	IC8701	TC74VHC08FT
	IC8704	TC7W126FU
	Q8701	2SJ461A
	Q8703	DTA124EUA
	Q8702	DTC124EUA
CAPACITORS		
	C8716 (100uF/6.3V)	ACH1364
	C8706,C8707	CCSRCH120J50
	C8709	CKSRYB472K50
	C8701-C8705,C8708,C8712,C8713	CKSRYF104Z50
RESISTORS		
	R8719	RAB4C101J
	R8702,R8704,R8720,R8745	RAB4C103J
	Other Resistors	RS1/16S###J

Mark No.	Description	Part No.
OTHERS		
	CN8701 PLUG 8-P	AKM1225
	X8702 CERAMIC RESONATOR	ASS1168
	X8701 CERAMIC RESONATOR (32.768kHz)	ASS1172
[CCD BLOCK]		
SEMICONDUCTORS		
	IC8903	M306V7FGFP
	IC8904	ML6428CS-1
	IC8910	NJM2283V
	IC8909	PE5398A
	IC8906	PST3628UR
	IC8905	TA1287FG
	IC8901	TC7W126FU
	Q8902-Q8904,Q8923,Q8924	2SA1586
	Q8906-Q8922	2SC4116
	D8901-D8917	1SS355
CAPACITORS		
	C8913,C8916 (2.2uF/16V)	ACG1109
	C8910,C8919,C8934 (10uF/16V)	ACH1399
	C8912,C8915	CCSRCH221J50
	C8920,C8921	CCSRCH5R0C50
	C8904,C8907	CCSRCH681J50
	C8944	CCSRCK2R0C50
	C8911,C8914,C8931	CKSRYB102K50
	C8930	CKSRYB103K50
	C8923,C8924,C8926-C8928,C8932	CKSRYB104K16
	C8935,C8936	CKSRYB105K10
	C8945	CKSRYB153K50
	C8929	CKSRYB683K16
	C8901-C8903,C8906,C8909	CKSRYF104Z16
	C8917,C8918,C8925,C8933,C8937	CKSRYF104Z16
	C8946,C8954	CKSRYF104Z16
	C8947-C8952 (10uF/16V)	DCH1165
RESISTORS		
	R8932,R8936,R9022	RAB4C101J
	R9017-R9021	RAB4C223J
	R8907-R8916,R8918,R8923,R8930	RAB4C473J
	R8948,R8949,R8951	RAB4C473J
	Other Resistors	RS1/16S###J
OTHERS		
	CN8901 PLUG 8-P	AKM1225
	X8901 CERAMIC RESONATOR (16MHz)	ASS1159
	X8902 CERALOCK	ASS1181

D BRIDGE ASSY

SEMICONDUCTORS		
	IC9702	NJM12904V
	IC9708	NL17SZ02DF
	IC9701	PQ20WZ11
	IC9705-IC9707	TC74VCX574FT
	IC9703,IC9704	TC7W126FU
	Q9701,Q9705-Q9707	2SA1586
	Q9704,Q9709	DTC124EUA
	Q9702	HN1C01FU
	Q9708	RN1902
	D9701	1SS355

Mark	No.	Description	Part No.
		CAPACITORS	
		C9701,C9702 (10uF/16V)	ACH1399
A		C9704-C9711	CKSRYF104Z50
		RESISTORS	
		R9704	RS1/16S1301F
		R9702	RS1/16S2700F
		R9703	RS1/16S3900F
		R9706,R9718	RS1/16S3901F
		R9719	RS1/16S8200F
		Other Resistors	RS1/16S###J
		OTHERS	
	CN9703	20P FPC CONNECTOR	52089-2020
B	CN9705	50P CONNECTER	AKM1236
	CN9706	120PFFC CONNECTER	AKP1230

E MDR ASSY

		SEMICONDUCTORS	
		IC9301,IC9302	TC74VHC08FT
		Q9301,Q9302	2SC4116
		Q9303	DTA124EUA
		CAPACITORS	
C		C9304	CCSRCH101J50
		C9301,C9305-C9308	CCSRCH471J50
		C9302,C9303	CKSRYF104Z50
		RESISTORS	
		All Resistors	RS1/16S###J
		OTHERS	
	CN9301	SOCKET (20P)	AKP1226
	CN9302	16P CONNECTOR	VKN1220

F SR ASSY

D		**SEMICONDUCTORS**	
		IC9451	SP3232ECY
		IC9453	TC74VHC00FT
		IC9452	TC74VHC125FT
		Q9451,Q9455,Q9458	2SA1586
		Q9453	2SC4116
		Q9452,Q9454,Q9456,Q9457	DTC124EUA
		D9451,D9452,D9459,D9460	1SS355
		CAPACITORS	
E		C9456,C9457 (10uF/16V)	ACH1399
		C9451-C9455,C9459,C9460	CKSRYF104Z16
		RESISTORS	
		R9456	RS1/10S680J
		Other Resistors	RS1/16S###J
		OTHERS	
	JA9453	MINI JACK(4P)	AKN1073
	JA9454	9P D-SUB SOCKET	AKP1240
	JA9451,JA9452	JACK	RKN1004
	CN9452	12P CONNECTOR	VKN1216

G FRONT ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
		IC9501	24LCS21A
		IC9602	MM1522XU
		IC9601	NJM12904V
		IC9502	TC74VHC08FT
		Q9503-Q9508	2SC4116
		Q9501,Q9502	DTC124EUA
		D9503	1SS301
		D9506-D9508,D9514-D9516	1SS302
		D9501,D9502,D9504,D9505	UDZS5.6B
		D9509-D9511	UDZS9.1B
		COILS AND FILTERS	
		L9503-L9506	LCTAW1R0J2520
		CAPACITORS	
		C9520-C9522,C9526-C9528	ACH1357
		C9605 (47uF/16V)	ACH1391
		C9517,C9518	CCSRCH220J50
		C9505,C9506,C9531-C9533	CKSRYB103K50
		C9504,C9514	CKSRYB104K16
		C9507-C9512	CKSRYB105K10
		C9503	CKSRYB473K16
		C9516,C9519,C9537,C9602,C9606	CKSRYF104Z16
		C9629	CKSRYF104Z16
		C9513,C9515,C9523,C9534-C9536	DCH1165
		C9538-C9540 (10uF/16V)	DCH1165
		RESISTORS	
		R9602,R9605	RS1/16S1001F
		Other Resistors	RS1/16S###J
		OTHERS	
	JA9501	PIN JACK(3P)	AKB1303
	JA9504	PIN JACK(3P)	AKB1305
	CN9502	50P CONNECTER	AKM1201
	JA9502	4P MINIDIN SOCKET(S)	AKP1238
	JA9505	15P D-SUB SOCKET	AKP1241
	CN9504	CONNECTOR	B6B-PH-SM3
	JA9503	JACK	RKN1026

H LED ASSY

		SEMICONDUCTORS	
		Q9651	DTA124EUA
		Q9652	RN2902
		D9652	SML-310DT
		D9654	SML-310MT
		D9653	SML-311UT
		CAPACITORS	
		C9651	CKSRYB103K50
		RESISTORS	
		All Resistors	RS1/16S###J
		OTHERS	
	CN9651	CONNECTOR	S7B-PH-SM3

I DTV TUNER BOARD

DTV TUNER BOARD has no service part.

Mark	No.	Description	Part No.

J AC SW ASSY

SWITCHES AND RELAYS

⚠	S9341		ASG1093

OTHERS

CN9341	2P-SIDE VA-CONNECTOR	S2P3-VH

K POWER SUPPLY UNIT

POWER SUPPLY UNIT has no service part.

6. ADJUSTMENT

1. At shipment, the unit is adjusted to its best conditions. Normally, it is not necessary to readjust even if an assembly is replaced. If the adjustment is shifted or if it becomes necessary to readjust because of part replacement, etc., perform the adjustment as described below.
2. Any value changed in Service/Factory mode will be stored in memory as soon as it is changed. Before readjustment, take note of the original values for reference in case you need to restore the original settings.
3. Use a stable AC power supply.

6.1 HOW TO ENTER SERVICE FACTORY MODE

■ Refer to the technical document (Service Know-How).

6.2 POSSIBLE CASES WHERE READJUSTMENT IS REQUIRED

■ When any of the following assemblies is replaced

POWER SUPPLY Unit	➡	No adjustment required
AV BOARD Assy	➡	No adjustment required
MR MAIN BOARD Assy	➡	No adjustment required
DTV TUNER Board	➡	No adjustment required
Other assemblies	➡	No adjustment required

■ When any part in the following assemblies is replaced

POWER SUPPLY Unit	➡	The assembly must be replaced as a unit, and no part replacement is allowed.
AV BOARD Assy	➡	If the front end (U7501, U7502) is replaced, adjustment is required.
MR MAIN BOARD Assy	➡	The assembly must be replaced as a unit, and no part replacement is allowed.
DTV TUNER Board	➡	The assembly must be replaced as a unit, and no part replacement is allowed.
Other assemblies	➡	No adjustment required

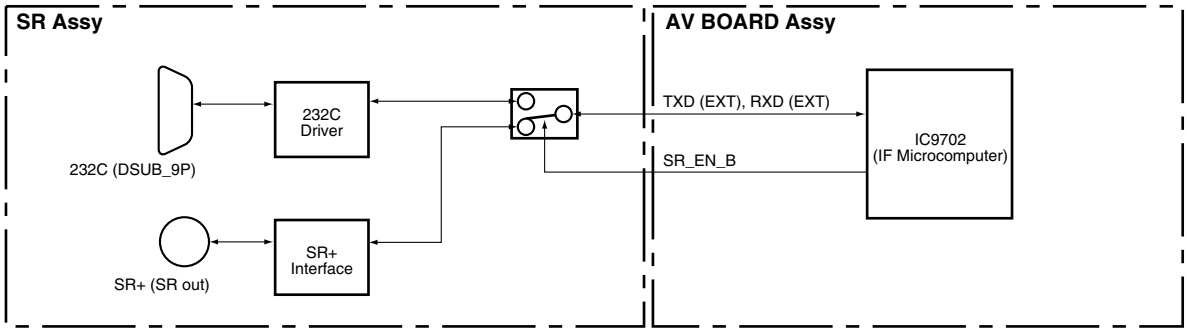
■ Adjustment items

① Video Level Adjustment
② Audio Level Adjustment
③ Video Level Adjustment
④ Audio Level Adjustment
⑤ MSP Adjustment
⑥ MSP Adjustment

6.3 USING RS-232C COMMANDS

For the PDP-434HD and -504HD series Plasma Displays, the circuitry is structured as shown in the diagram below to support the SR+ system. Controlling with either the SR+ system or RS-232C commands can be selected. As the SR+ system is selected at shipment, to control with RS-232C commands in servicing it is necessary to switch the paths. After servicing, be sure to return the setting to the SR+ system.

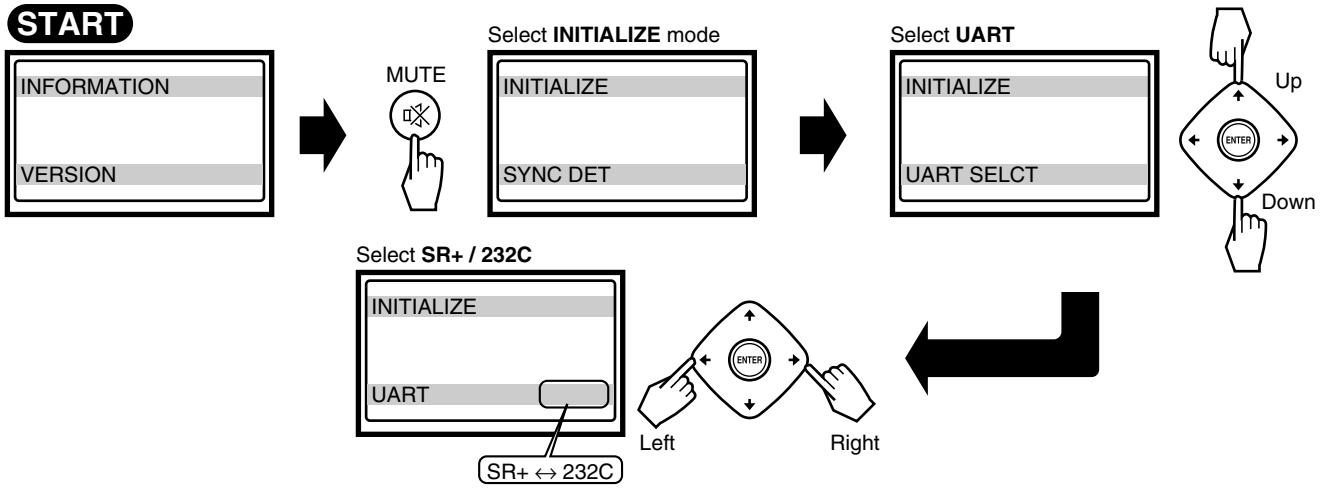
● Rough diagram of switching between SR+ and RS-232C



● How to switch from SR+ to RS-232C

Remote control unit SR+ → 232C / 232C → SR+

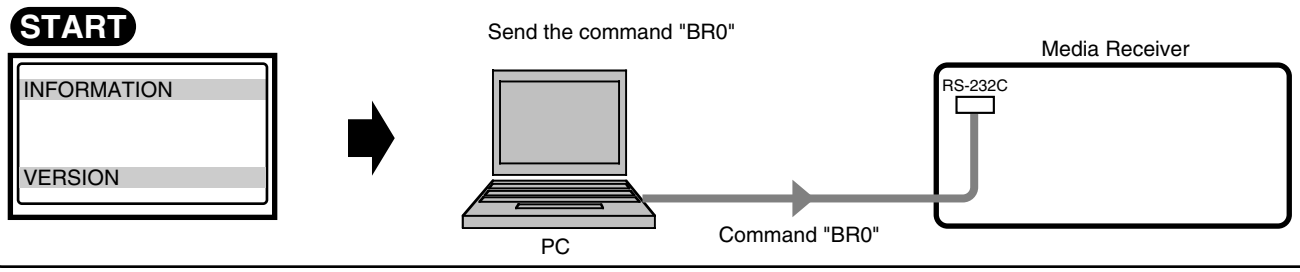
Enter the Service Factory mode



Tips: How to change the SR+/RS-232C setting without entering Service Factory mode
Hold the **VOLUME** ◿+ or ◿– key on the remote control unit pressed for 3-10 seconds during Standby mode.
Then within 3 seconds after the key is released, hold the **2-screen** ◑ key on the remote control unit pressed for 3-10 seconds.
Then within 3 seconds after the key is released, use the **SET** key on the remote control unit to set to RS-232C (the baud rate last selected is chosen) or the **HOME MENU** key to set to SR+.

PC 232C → SR+ only

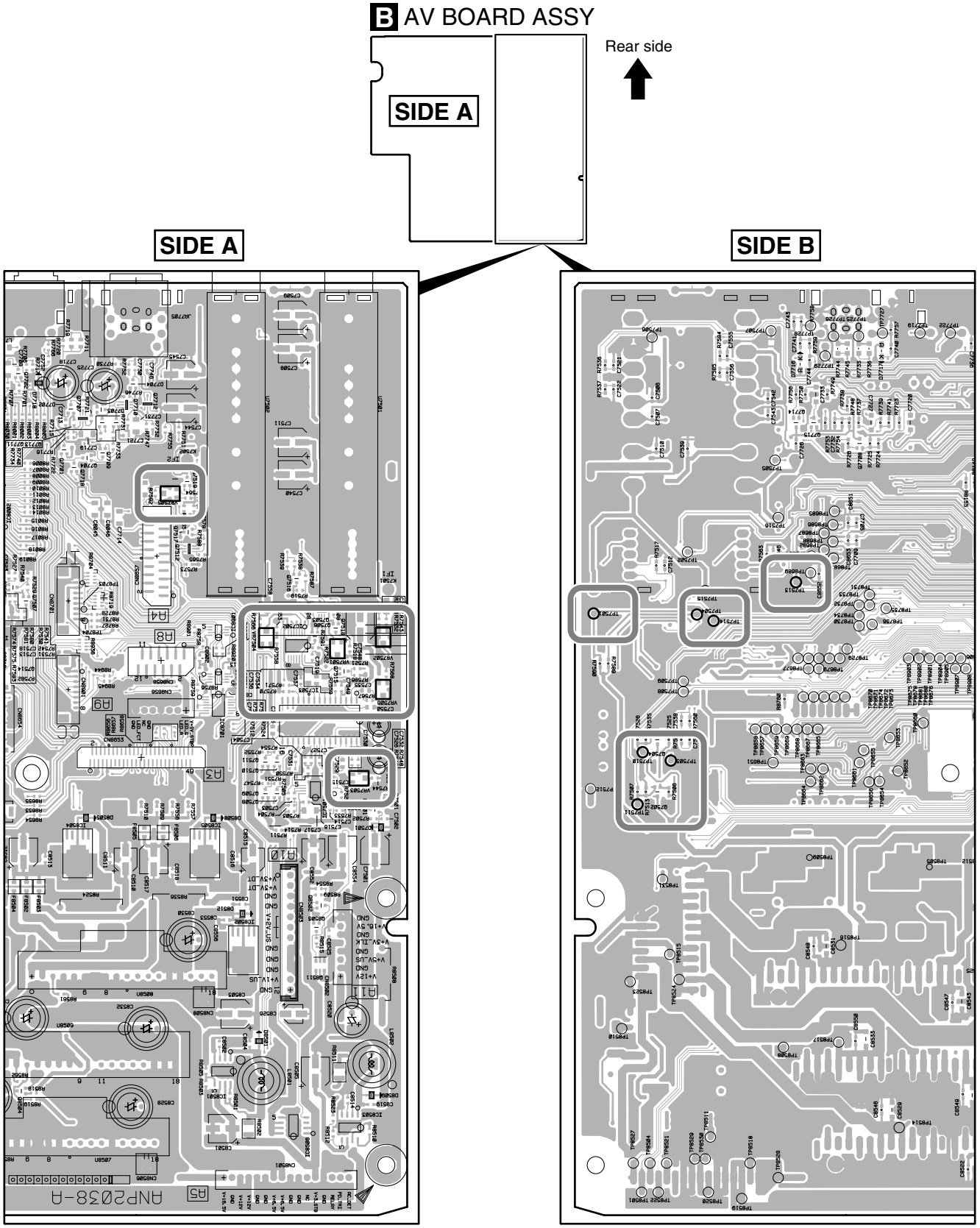
Enter the Service Factory mode
(See "6.7 SERVICE FACTORY MODE".)



6.4 ADJUSTMENT ITEMS

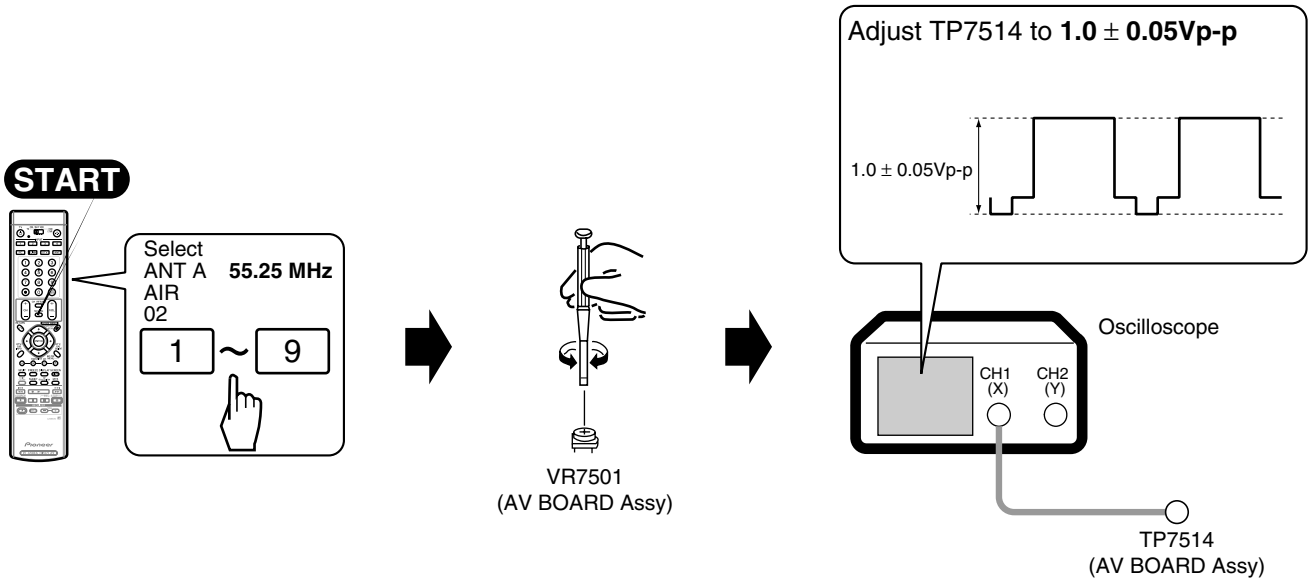
If readjustment is necessary because of adjustment error at shipment, perform adjustments as shown below.

● **Adjustment Points**



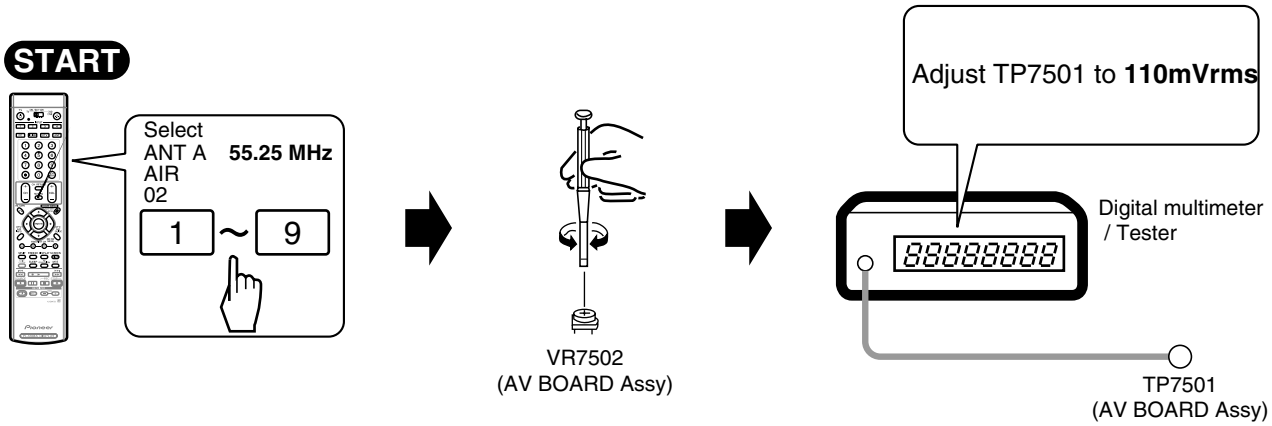
① Video Level Adjustment

Equipment : SG, Oscilloscope
Condition : Input RF level 60dBμV
Modulation 87.5%
White bar 100%



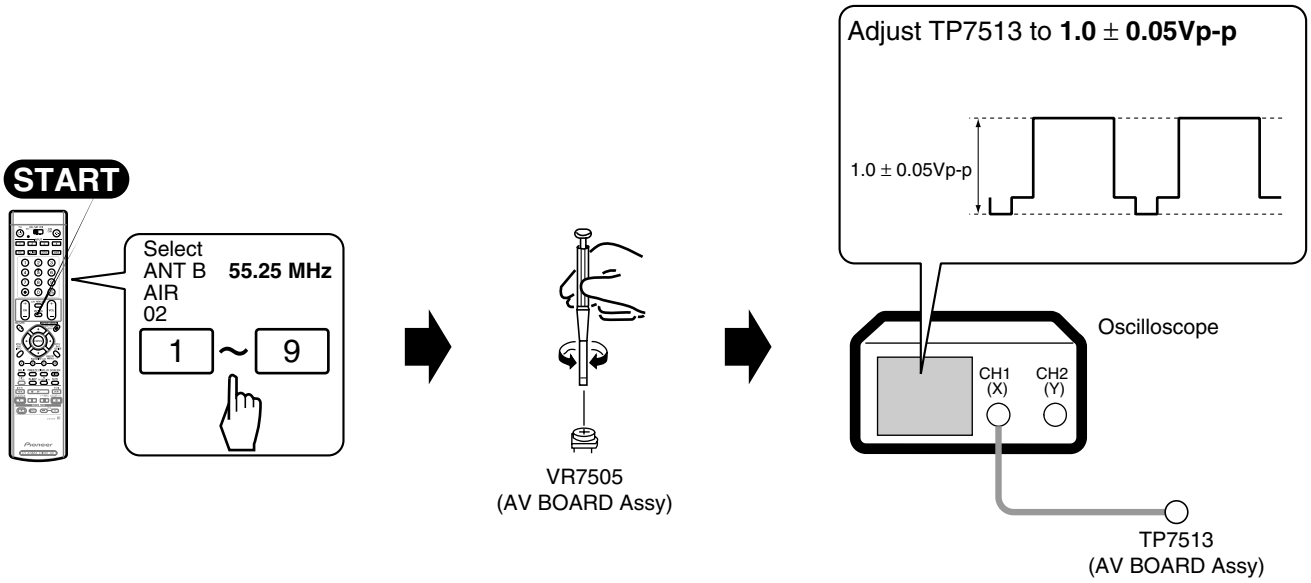
② Audio Level Adjustment

Equipment : SG, Digital mutimeter / Tester
Condition : Input RF level 60dBμV
1kHz MONO 100%



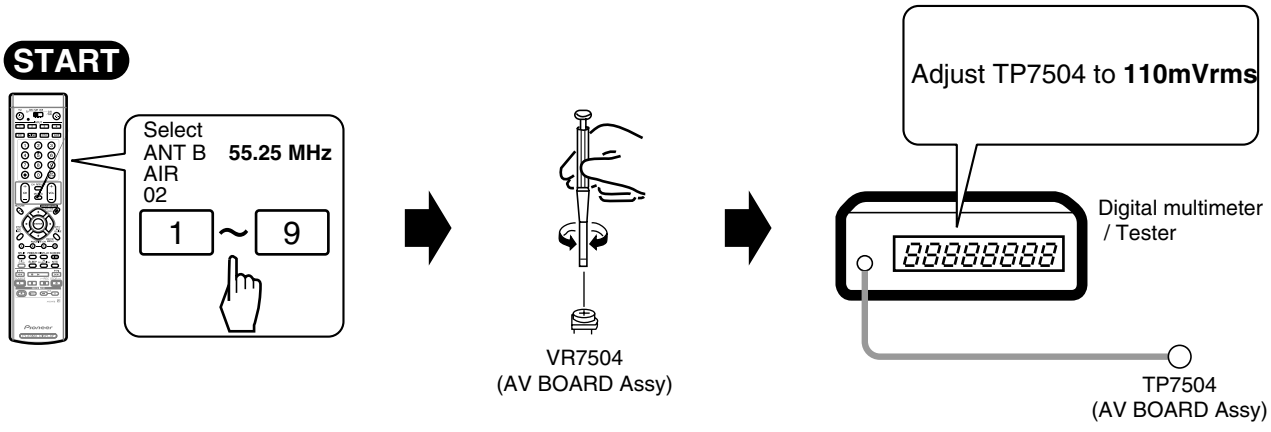
3 Video Level Adjustment

Equipment : SG, Oscilloscope
Condition : Input RF level 60dBμV
Modulation 87.5%
White bar 100%



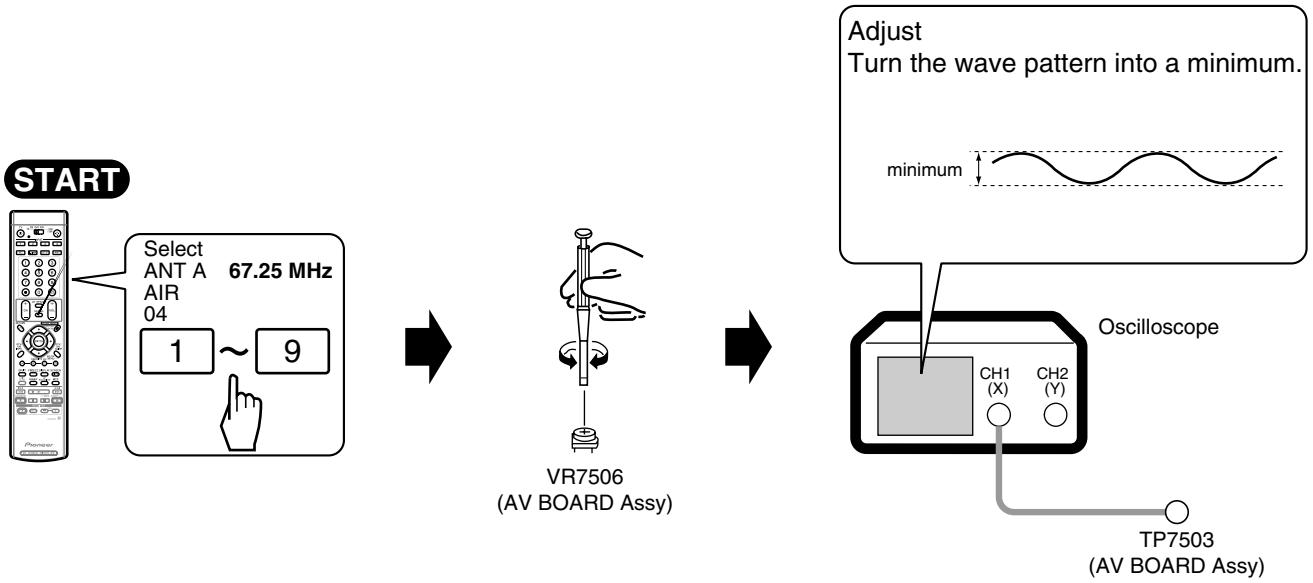
4 Audio Level Adjustment

Equipment : SG, Digital mutimeter / Tester
Condition : Input RF level 60dBμV
1kHz MONO 100%



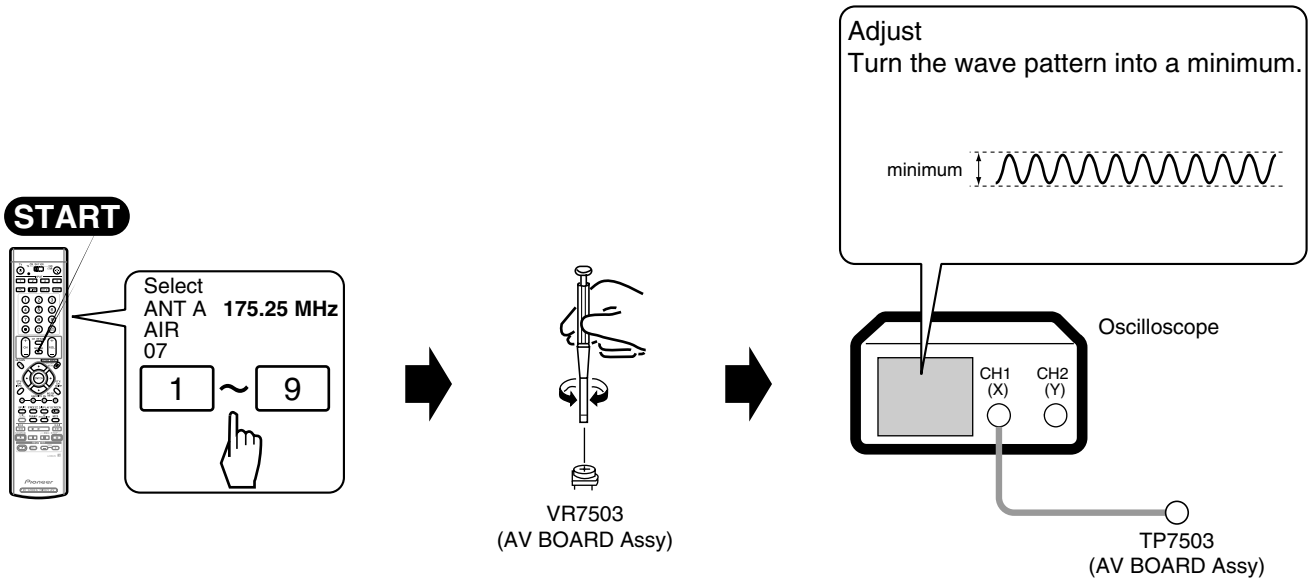
5 MSP Adjustment

Equipment : SG, Digital mutimeter / Tester
Condition : Input RF level 60dBμV
300Hz STEREO 100% Lch Only



6 MSP Adjustment

Equipment : SG
Condition : Input RF level 60dBμV
5kHz STEREO 100% Lch Only

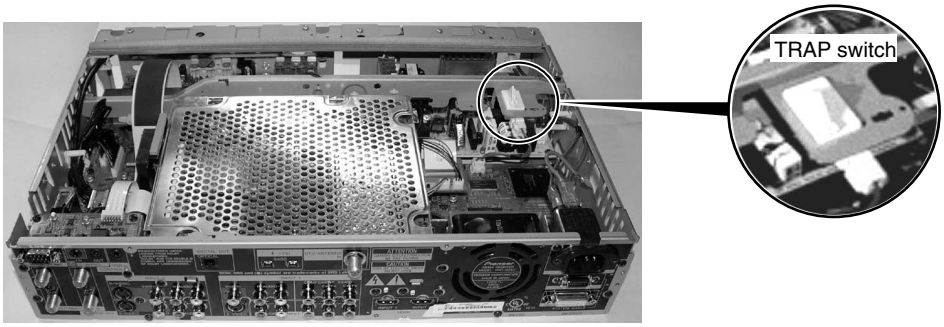


6.5 TRAP SWITCH

● Outline and Notes

For video data transmission from the Media Receiver to the PDP-434HD and PDP-504HD-series Plasma Displays, digital signals are used. Therefore, this unit adopts the HDCP (High-bandwidth Digital Content Protection) system for copyright protection. This unit is also provided with a detection switch (TRAP switch) that will prohibit the unit from being turned on again "if the upper plate of the unit is accidentally opened," in order to prevent the panel technology from being leaked out.

The TRAP switch is disabled while the unit is turned off.
When performing internal diagnosis of the PDP, fix the switch to the OFF position using adhesive tape before turning on the unit. After servicing, be sure to remove the adhesive tape.



● Rear view

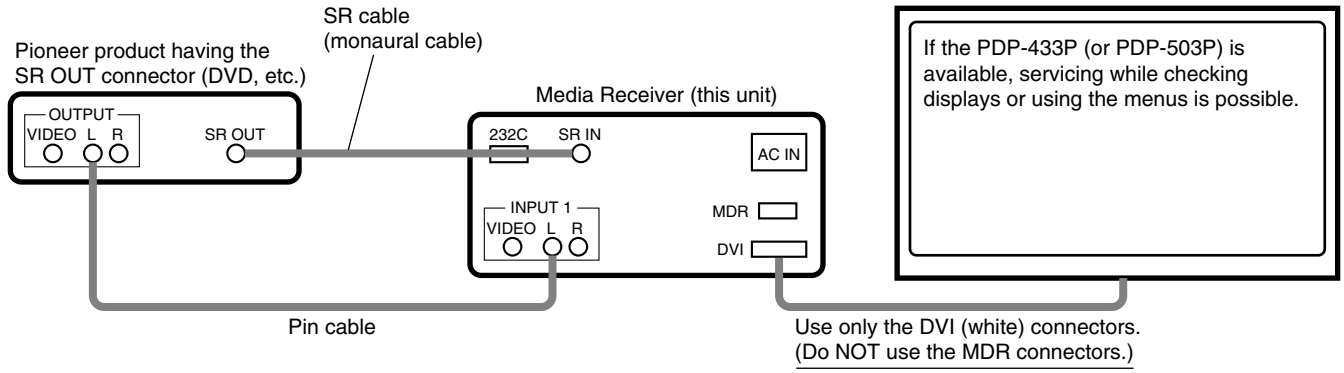
6.6 SERVICING USING ONLY THE MEDIA RECEIVER

For servicing of the PDP-434HD and PDP-504HD-series Plasma Display using only the Media Receiver, the following two methods can be used:

● Remote controlling using SR connections

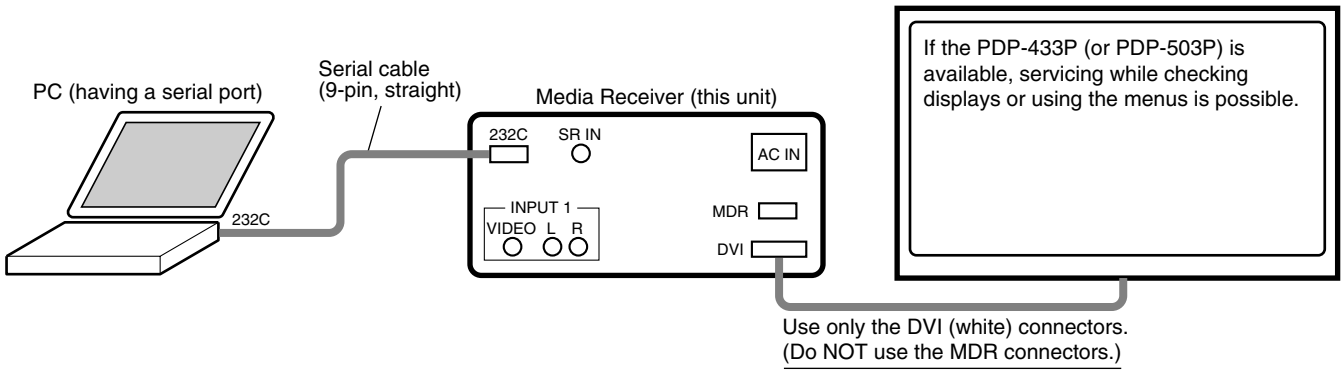
About connections

- Connect the SR OUT connector of a Pioneer product having that connector (a DVD in the following example) and the SR IN connector of the Media Receiver, using the SR cable. As the remote control sensor is not provided with the Media Receiver, this connection is required for using the remote control unit if the panel is not available. In this case, aim the remote control unit at the remote control sensor of the device (DVD in this case).
- Connect either the audio or the video output of the device (DVD in the example) and the corresponding audio or video input of the Media Receiver, using a cable with phono plugs. This connection is required in order to use ground in common with the SR cable, because with the SR cable connection the ground connection for signal reference is not available. In the example, the audio L channel is used, but the audio R channel or video can be used instead.
- If the plasma display for a previous model, such as the PDP-433P or PDP-503P, is available, servicing while checking displays or using the menus is possible. For this, connect only the DVI connectors (white) of the Media Receiver and the plasma display. The MDR connector of the Media Receiver must not be used, even though it has the same shape and number of pins, because signals assigned to the connectors differ. Using the MDR connector may damage the unit.



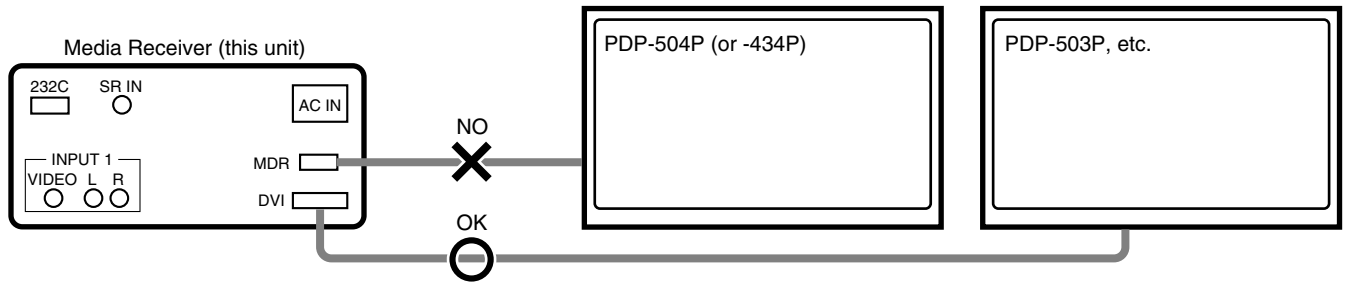
● RS-232C control using a PC

As the SR+ system is selected at shipment, to use RS-232C control, RS-232C must be selected beforehand using the remote control unit and by making the above connections. For details, see "6.3. USING RS-232C COMMANDS."
For connection with the PC, use a straight cable.



● Note on connection

If the MDR connector of the PDP-434HD or -504HD-series is used, it is considered that the PDP-434P (or -504P) is connected, and the Media Receiver operates on such precondition, **which may result in a failure of the Media Receiver. Be sure not to connect to the MDR connector.** (Do NOT use the MDR connector when servicing the Media Receiver alone.)



6.7 SERVICE FACTORY MODE

To operate in Service Factory mode, use the supplied remote control unit.

Operation in Service Factory mode

● Functions whose settings are set to OFF

The settings for the following functions are set to OFF when Service Factory mode is entered (including when the "FAY" command is received):

- Two-screen operations (input function set on the main side is selected)
- P ZOOM
- STILL
- Detection of the TRAP switch (The log in the EEPROM is retained.)

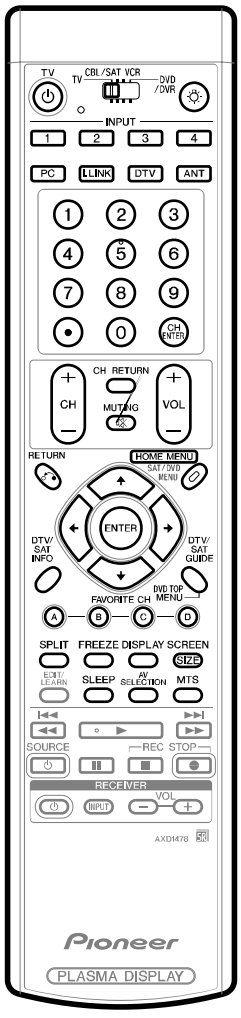
● User data

User data will be treated as follows:

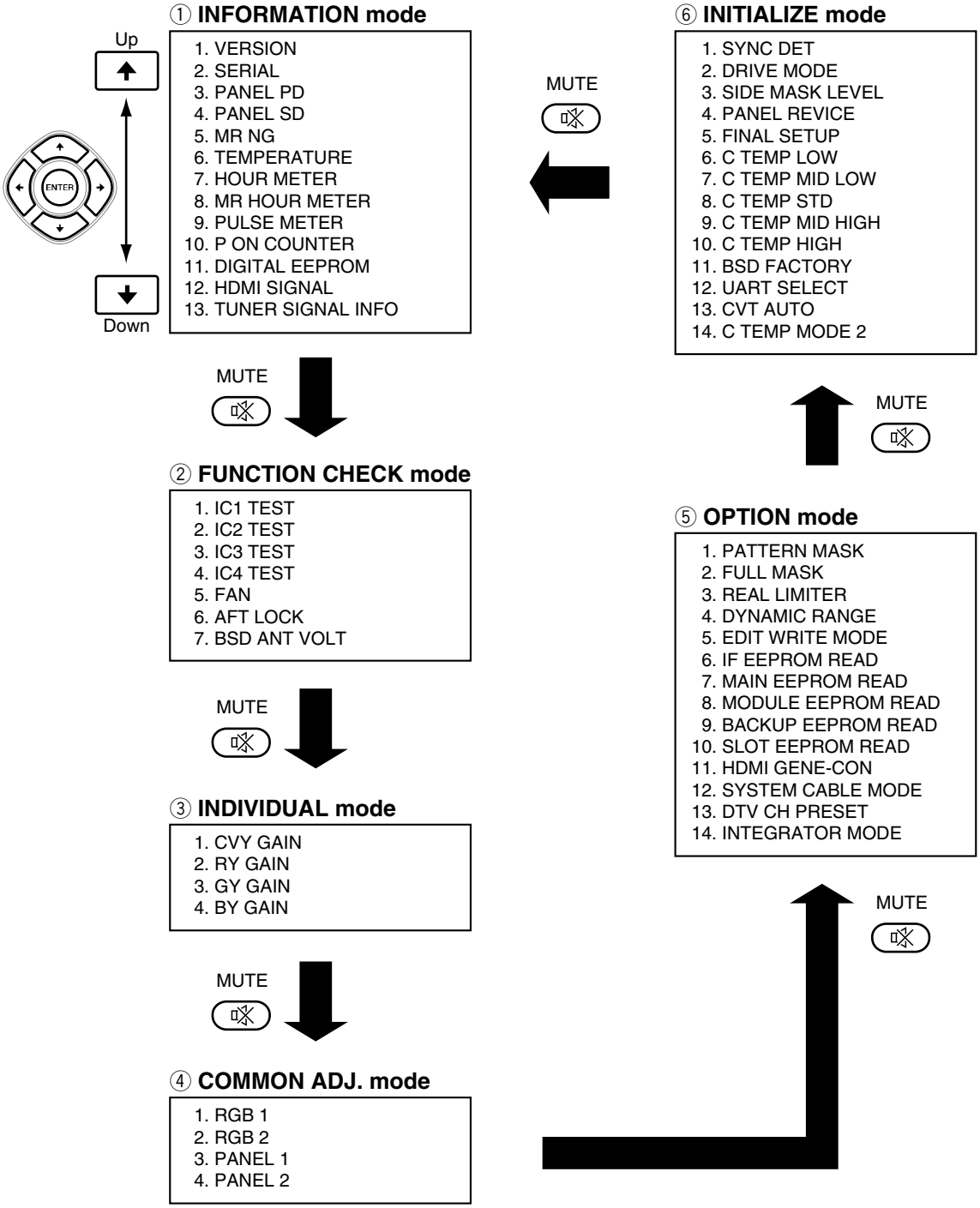
- User data on picture- and audio-quality adjustments are not reflected (data stored in memory will be retained).
- Data on screen position are reset to the default values (data stored in memory will be retained).

Remote control codes in Service Factory mode

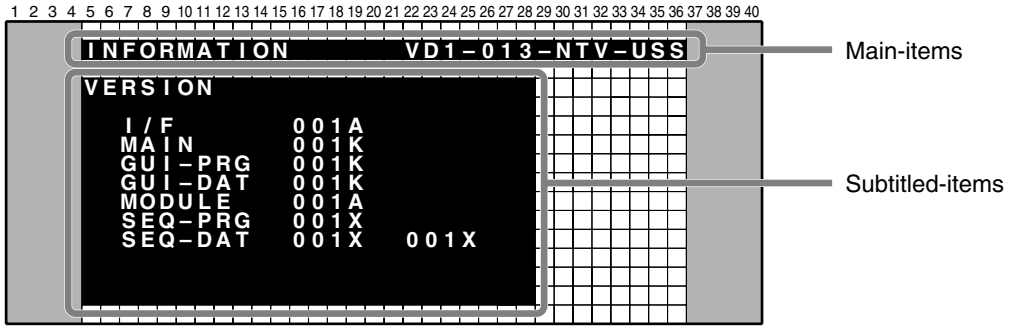
SR Function	Main Function	Remarks
Muting	Switching the main items	Shifting to the next main item
DOWN	Switching the subtitled items	Shifting downward to the next subtitled item
UP	Switching the subtitled items	Shifting upward to the next upper layer
LEFT	Increasing the adjustment value	Increasing the adjustment value
RIGHT	Decreasing the adjustment value	Decreasing the adjustment value
SET	Switching layers	Shifting downward or upward to the next lower or upper layer
INPUT	Selecting input	Shifting the input to the next function
INPUTxx	Selecting input	Switching the input to xx
CH+	Increasing the channel number	Advancing a preset channel (effective when Function is set to TV)
CH-	Decreasing the channel number	Turning a preset channel backward (effective when Function is set to TV)
Numeric keys	Function: TV	Function: TV (previously selected channel number is selected)
BS numeric keys	Function: BS	Function: BS (previously selected channel number is selected)
POWER	Power OFF	Turning the power off
FACTORY	Factory OFF	Turning Service Factory mode off
MENU	Menu ON	Turning Service Factory mode off and Menu mode on



Changes of the Service Factory menus

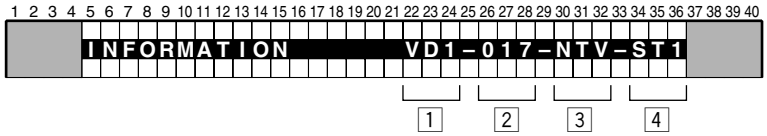


Indications in Service Factory mode



Main-item indications

Four parameters are displayed:



1 Input function

Input Functions	On-Screen Display
INPUT 1	VD1
Terrestrial wave	AIR
CS-DIGITAL	CSD
BS-DIGITAL	BSD

2 SIG mode and screen size

Note: See SIG-Mode Tables. (See next page.)

3 Color system and signal type

Color System and Signal Type		On-Screen Display
NTSC	Composite input/ S-connector input	NTV
BLACK/WHITE		BWV
Y / CB / CR		CBR
Y / PB / PR		PBR
RGB		RGB
Digital video signal		DIG

4 Option (Destination, etc.)

Options	On-Screen Display
HD system in Japan	JHS

● SIG-Mode Table

The signal mode is displayed in three characters:
First character: Resolution of the input signal (numerics for the video signals, and alphabetics for the PC signals)
Second character: Grouping of the V frequencies

SIG-Mode table for video signals (resolutions and V frequencies)

SIG-Mode	Signal Type	Vertical Frequency fv (Hz)	Horizontal Frequency fh (kHz)
13*	SDTV • 525i	60.000	15.750
21*	SDTV • 625i	50.000	15.625
33*	SDTV • 525p	60.000	31.500
41*	HDTV • 1125i	50.000	28.125
43*		60.000	33.750
51*	SDTV • 625p	50.000	31.250
61*	HDTV • 750p	50.000	37.500
63*		60.000	45.000

SIG-Mode table for PC signals (resolutions and V frequencies)

SIG-Mode	Signal Type	Vertical Frequency fv (Hz)	Horizontal Frequency fh (kHz)
A2*	720 × 400	56.000	24.825
A5*		70.087	31.469
A8*		85.050	37.861
B3*	640 × 480	59.940	31.469
B4*		66.666	35.000
B6*		72.809	37.861
B7*		75.000	37.500
B8*		85.000	43.300
C3*	852 × 480	60.000	31.680
D2*	800 × 600	56.250	35.1556
D3*		60.317	37.879
D6*		72.188	48.077
D7*		75.000	46.875
D8*		85.061	53.674
E7*	832 × 624	74.550	49.725
F3*	1024 × 768	60.004	48.363
F5*		70.069	56.476
F7*		75.029	60.023
F8*		84.997	68.677
G2*	1280 × 768	56.250	45.113
G3*		59.833	47.986
G5*		70.000	56.137

2nd Character	Reference V Frequency	Remarks
–	–	No signal
1	50	
2	56	
3	60	
4	66	
5	70	
6	For interpolation of 72-Hz area	For distinguishing between 70-Hz or 75-Hz area
7	75	
8	85	
9 (spare)	–	
?	–	Out of range

Third character: Selection of the screen size by the user is displayed.
(○: available, ×: not available)

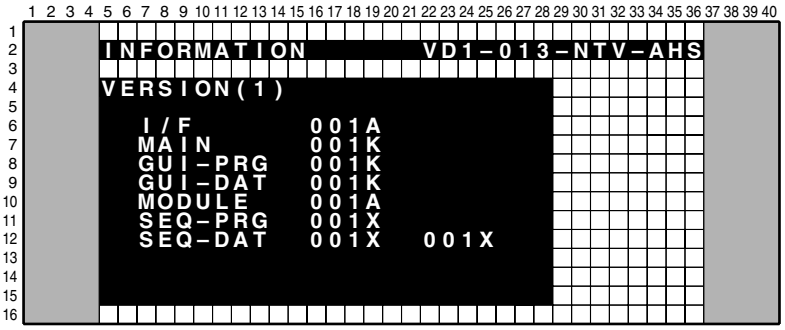
3rd Character	Description on GUI	VIDEO	PC	Remarks
0	DOT BY DOT	×	○	
1	4 : 3	○	○	
2	FULL (FULL1)	○	○	
3	ZOOM	○	×	
4	CINEMA	○	×	
5	WIDE	○	×	
6	FULL 14 : 9	○	×	
7	CINEMA 14 : 9	○	×	
8	FULL2	○	○	HDTV1035i
9	OVERSCAN	○	×	

① INFORMATION mode

● Operation items

No.	Function / Display	Content
1	VERSION (1)	The flash memory versions for each device are displayed. (common part)
2	VERSION (2)	The flash memory versions for each device are displayed. (individual part)
3	SERIAL	For displaying the serial number of the product (not used)
4	PANEL PD	Power-down generated on the panel side and its time of occurrence are displayed.
5	PANEL SD	Shutdown generated on the panel side and its time of occurrence are displayed.
6	MR NG	Power-down and/or shutdown generated on the Media Receiver side and their/its time of occurrence are displayed.
7	TEMPERATURE	Information on temperature is displayed.
8	HOUR METER	Cumulative power-on time to the panel is displayed.
9	MR HOUR METER	Cumulative power-on time to the Media Receiver is displayed.
10	PULSE METER	The pulse meter value on the panel side is displayed.
11	P ON COUNTER	The number of times the power to the panel was turned on is displayed.
12	DIGITAL EEPROM	The status of the backup data for the module microcomputer is displayed.
13	HDMI SIGNAL INFO.	The file information of HDMI series are displayed.
14	TUNER SIGNAL INFO.	The radio-wave conditions input to the GCR and IC 1 are displayed.

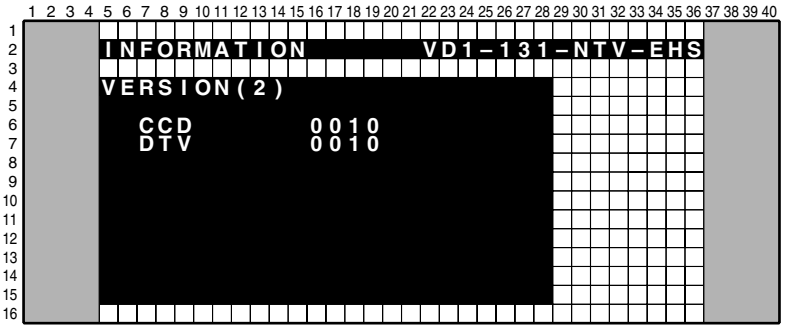
1. VERSION (1)



The flash memory versions for each device are displayed.

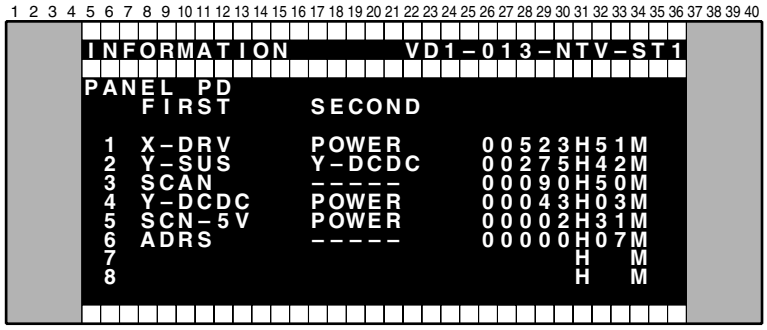
Flash memory of Device	On-Screen Display
User IF microcomputer (MR: IC8702)	I / F
Main microcomputer (MR: IC7207)	MAIN
Program for IC 3 (MR: IC7101)	GUI–PRG
GUI data for IC 3 (MR: IC7101)	GUI–DAT
Module microcomputer (for the PDP)	MODULE
Program for IC 4 (for the PDP)	SEQ–PRG
Sequence data for IC 4 (for the PDP)	SEQ–DAT

2. VERSION (2)



Device	Name Display	Version Display	Remarks
CCD-UCOM	CCD	4 character	
DTV TUNER UNIT	DTV	4 character	

4. PANEL PD

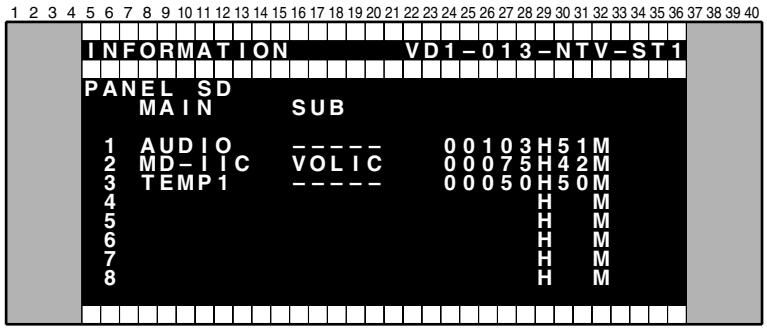


Power-down information only on the panel side is displayed.

• Panel power-down information

No.	Type of Power-down	On-Screen Display	No.	Type of Power-down	On-Screen Display
1	No corresponding item	- - - - -	7	Power-down of the Y-SUS system	Y-SUS
2	Power-down of the main power supply system	POWER	8	Power-down of the address system	ADRS
3	Power-down of the scanning system	SCAN	9	Power-down of the X-DRIVE circuitry	X-DRV
4	Power-down in the path between the scanning system and 5-V power supply	SCN-5V	A	Power-down of the X-DC/DC converter	X-DCDC
5	Power-down of the Y-Drive system	Y-DRV	B	Power-down of the X-SUS system	X-SUS
6	Power-down of the Y-DC/DC converter	Y-DCDC	C	Power-down of the driving IC power supply system	D-DCDC

5. PANEL SD

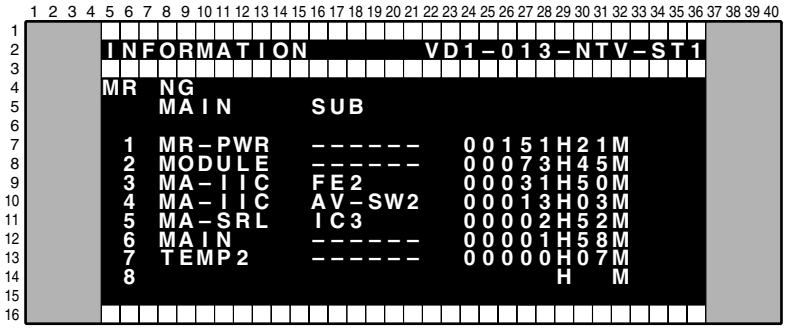


The shutdown log only on the panel side is displayed.

• Panel shutdown information

No.	Type of Shutdown	On-Screen Display (MAIN)	Remarks
1	Abnormality in IC 4 communication	IC4	
2	Abnormality in module microcomputer IIC communication	MD-IIC	Subcategories exist. (EEPROM4K : IC5206, EROM2K : IC402, VOLIC : IC3502)
3	Moisture-condensation detection	DEW	
4	Abnormality in panel temperature	TEMP1	
5	Short-circuiting of the speakers	AUDIO	
6	Abnormality in module microcomputer communication	MODULE	

6. MR NG



Information on power-down and shutdown of the Media Receiver side is displayed.

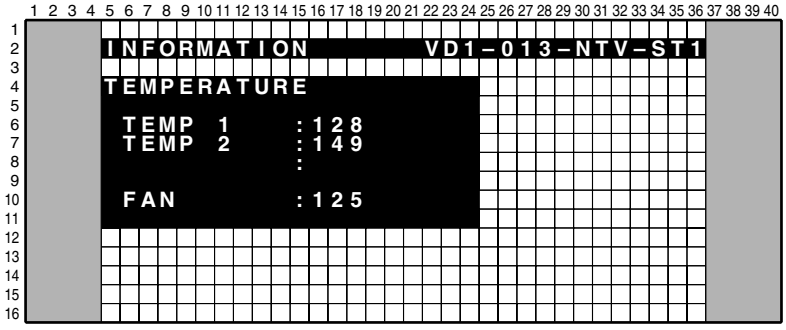
• Media Receiver NG information

No.	Type of Failure	On-Screen Display (MAIN)	Remarks
1	Power-down of the MR power supply	MR-PWR	
2	Abnormality in module microcomputer communication	MODULE	
3	Abnormality in 3-wire serial communication of the main microcomputer	MA-SRL	Subcategories exist.
4	Abnormality in main microcomputer IIC communication	MA-IIC	Subcategories exist.
5	Abnormality in main microcomputer communication	MAIN	
6	Abnormality in temperature of the Media Receiver	TEMP2	
7	Fan stopped.	FAN	
8	Abnormality in communication of the digital tuner	BS-D	Subcategories exist.
9	Abnormality in the ASIC power supply on the MR side	M-DCDC	

• Subcategory information

Type of Shutdown	Subcategory	Remarks
MA-SRL	IF microcomputer (IC8702), IC2 (IC7004), IC3 (IC7101)	
MA-IIC	MA-EEP (IC7205), IC1-M (IC6107), IC1-S (IC6255), HDMI1 (IC6801), HDMI2 (IC6881)*2, AD-M (IC6402), AD-S (IC6602), IC6 (IC6951), CCD (IC8903)*2, FE1 (U7501), FE2 (U7502)*2, AV-SW1 (IC8002), AV-SW2 (IC8005), TX-COM (IC8904)*3, MPX (IC7502)*3	*2 : U.S. model only *3 : Europe model and General area model
BS-D or DTV (Japan or U.S. only)	PS/RST	No power, or reset status continued
	RETRY	The signal 0x02 (ready) has not been received.
	DEVICE	Abnormality in BSD status
CARD	COMM	
	DEVICE	
	RESET	

7. TEMPERATURE

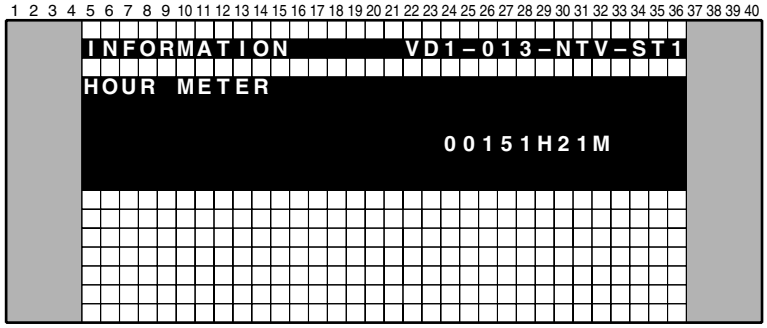


TEMP1: The value read from the temperature sensor built into the panel is displayed in the range of 000-255.
Note: Refer to the service manual of the panel.

TEMP2: The value read from the temperature sensor built into the Media Receiver is displayed in the range of 000-255. For reference, the approximate value for 60°C is 169 and for 35°C is 131.

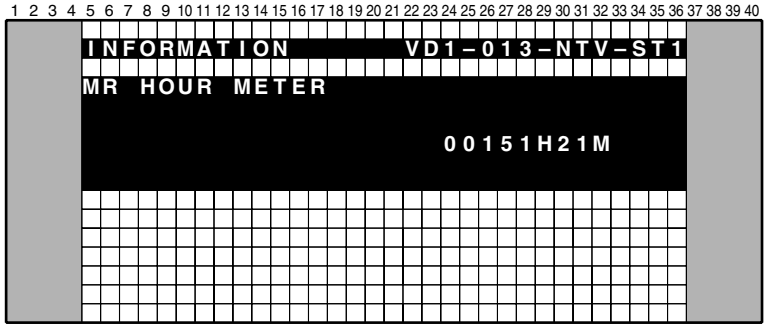
FAN: The value of the Fan output is displayed. At shipment, the output is controlled in 2 steps, and the value for strong output is set to about 131, and the value for weak output is set to about 93.

8. HOUR METER



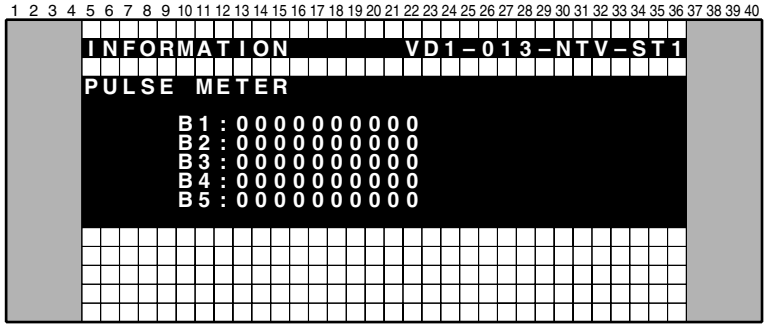
The cumulative power-on time of the panel is displayed.

9. MR HOUR METER



The cumulative power-on time of the Media Receiver is displayed.

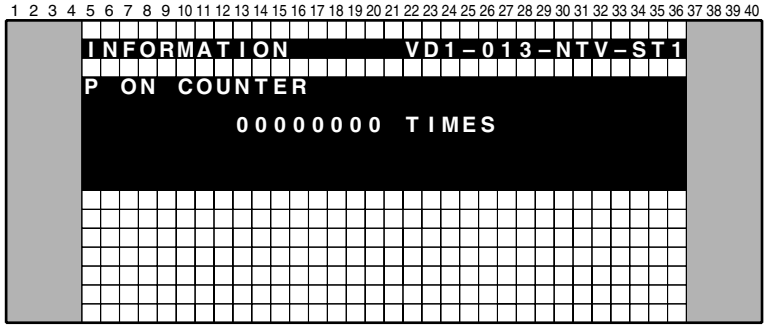
10. PULSE METER



The cumulative number of pulses of the panel is displayed.

Note : Dividing screen into sixteen times sixteen and counting five different locations on a screen. Each item, it's counted total 3840 pixels (for 50 inch) or 3072 pixels (for 43 inch) discharging. (1280/16 x 768/16 = 3840, 1204/16 x 768/16 = 3072)

11. P ON COUNTER

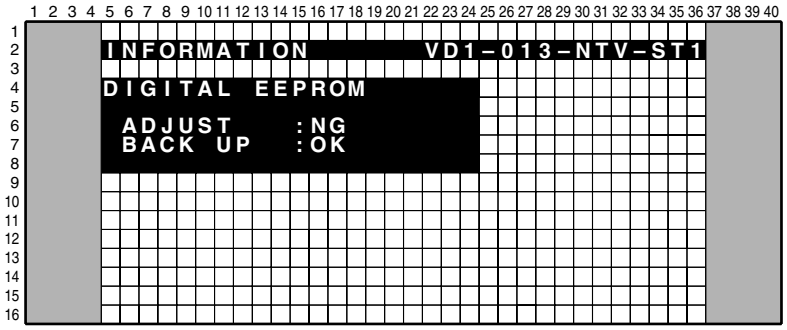


The cumulative number of times the panel was turned on is displayed.

12. DIGITAL EEPROM

When the DIGITAL Assy of the PDP is to be replaced, the adjustment values in it can be temporarily stored in the ROM then be written on the new Assy after replacement. (This function is not supported for initially produced products. It is planned for this function to be supported as soon as it becomes possible.)

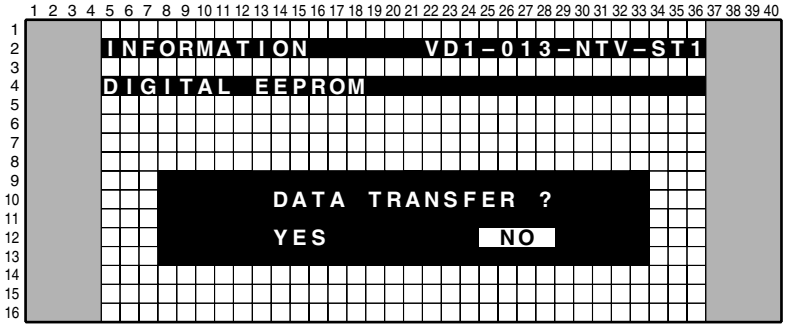
Whether adjustment has been made on the DIGITAL Assy of the PDP or not (i.e., in the state of a new service part), and whether the data on any adjustment values are retained in the backup ROM or not are displayed.



• Downloading the data from the backup ROM

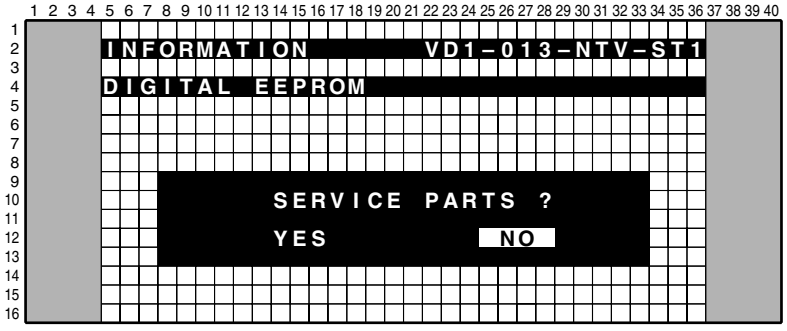
(This must be performed after the DIGITAL Assy is replaced.)

To download the data from the backup ROM, press the ENTER key while the above screen is displayed. The display changes as shown below. Move the cursor to YES then press the ENTER key. The data in the backup ROM are downloaded into the new Assy.

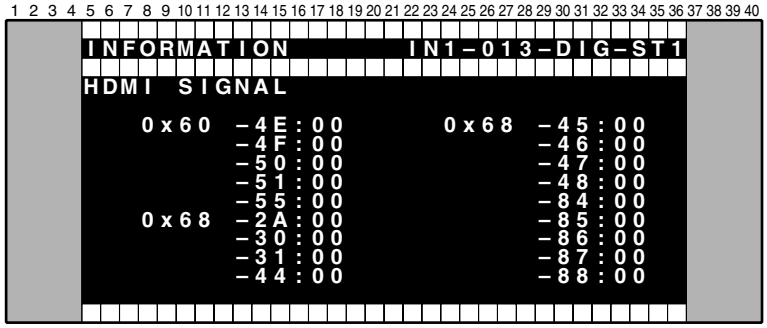


• Clearing the data in the ROM of the DIGITAL Assy

The display below is automatically displayed after either YES or NO is selected on the display shown above. Move the cursor to YES then press the ENTER key. Then all data on adjustment values in the ROM of the DIGITAL Assy are cleared.

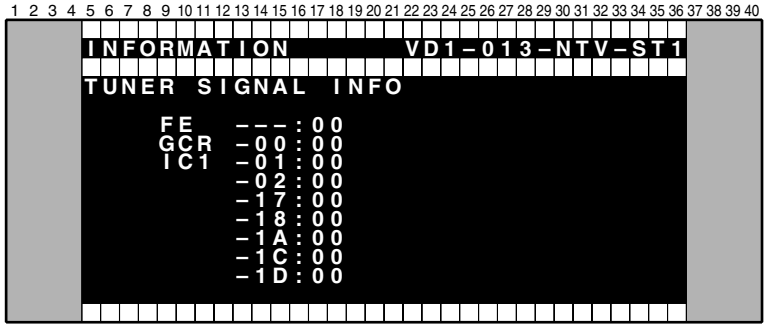


13. HDMI SIGNAL INFO



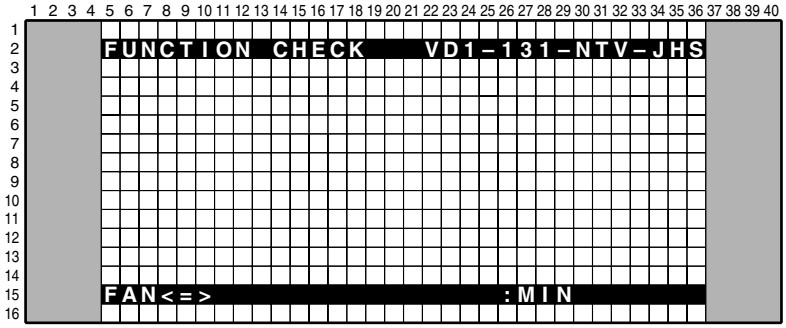
Technical examination display
(Reading status registers in HDMI receiver and displaying them by HEX value.)

14. TUNER SIGNAL INFO



For technical discussion

② FUNCTION CHECK



No last memory in this menu

No.	Display	Detail	Remarks	232C Command
1	IC1 TEST		For CMX	
2	IC2 TEST		For CMX	
3	IC3 TEST		For CMX	
4	IC4 TEST		For CMX	
5	FAN <=>	: MINI ⇔ CONT ⇔ MAX		*1
6	AFT <=>	UNLOCKED ⇔ LOCKED	For Factory use	ALN/ALY
7	BSD ANT VOLT <=>	15V ⇔ 11V ⇔ 0	Only domestic model	BVH/BVM/BVL
8	AUTO PRESET CHECK <=>	NO ⇔ YES	Only Europe HD and for Factory use	None

2.1 FAN

Controls FAN speed by force. (MIN : STOP, CNT : Low Speed, MAX : High)
Temp sensor is working only displaying data value in service factory mode.
After getting off service factory mode, this function is set to normal automatically.

2.2 AFT LOCK

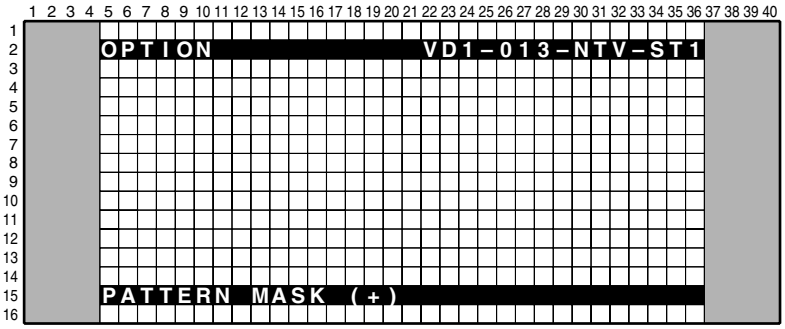
For production line use only
Stop AFT tuner received function and receive a center frequency.
After turning off a unit (including stand-by mode), this setting is set normal (AFT function) automatically.
It's performed to two tuner and DTV tuner to U.S. model.

2.3 AUTO PRESET CHECK

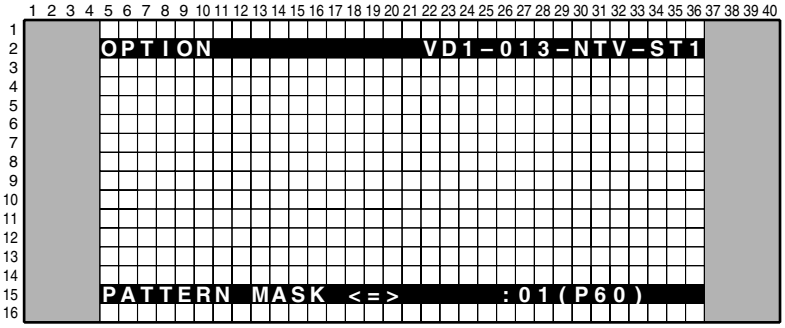
For production line use only

Select No.	Display	Function	Remarks
1 (Default)	NO		Performing this function when shifting from "NO" to "YES".
7	YES	Perform AUTO PRESET function to specific frequency to reduce AUTO RESET time at production line.	

⑤ OPTION mode



No.	Function/Display	Content	Corresponding RS-232C Command
1	PATTERN MASK (+)	Selecting the pattern mask of IC4	
2	FULL MASK (+)	Selecting the raster mask of IC4	
3	PEAK LIMITER	ON ⇔ FFF	PAN/PAF
4	DYNAMIC RANGE	ON ⇔ FFF	DYY/DYN
5	EDID WRITE MODE	DISABLE ⇔ ENABLE	EWY/EWN
9	EU CH PRESET	FACTORY ⇔ USER	



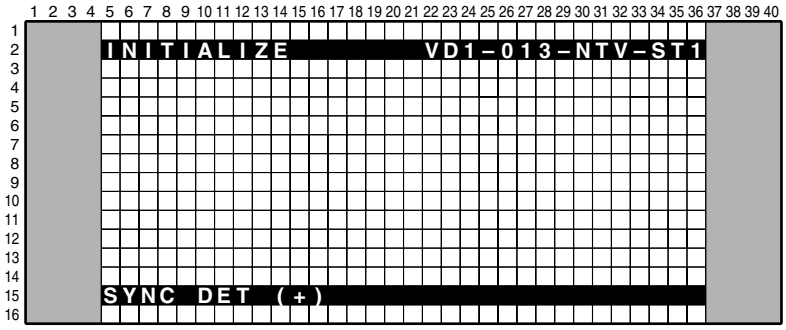
The mask frequency can be cyclically changed (see the table below) by pressing the left or right cursor key. The mask pattern can be cyclically changed by pressing the up or down cursor key. Approximately 2 seconds after either the up or down cursor key is pressed, the mask screen will appear.

• Frequency selection while the mask is displayed

No.	Function/Display	Content	Corresponding RS-232C Command
0	V50	Video 50-Hz sequence	F50
1	V60 (initial value)	Video 60-Hz sequence	F60
2	P60	PC 60-Hz sequence	F61
3	P70	PC 70-Hz sequence	F70
4	V72	Video 72-Hz sequence	F72
5	V75	Video 75-Hz sequence	F75

⑥ INITIALIZE mode

(For managing switching of the initial settings and destination setting)



No.	Function/Display	Content
1	SYNC DET (+)	For setting the parameter for sync detection of IC1/GCR
2	DRIVE MODE (+)	(Not used)
3	SIDE MASK LEV (+)	(Not used)
4	PANEL REVICE (+)	(Not used)
5	FINAL SETUP (+)	
6	C TEMP LOW (+)	
7	C TEMP MID LOW (+)	
8	C TEMP STD (+)	
9	C TEMP MID HIGH (+)	
10	C TEMP HIGH (+)	
11	BSD FACTORY (+)	(Not used)
12	UART SELECT <=>	1200-232C ⇔ ••• ⇔ 38400-232C ⇔ 9600-SR+
13	CVT AUTO <=>	DISABLE ⇔ ENABLE (For Factory use)

• When there is a modification log, if the " i+ " key is held pressed for at least 3 seconds while the above display is displayed, the modification log will be cleared.

• UART SELCT

Option No.	Function / Display	Operation / Control	Remarks	Corresponding RS-232C Command
1 (initial setting)	9600-SR+	To set to SR+ (9600 BPS)	For switching external communication between RS-232C and SR+	BR0
2	1200-232C	To set to RS-232C (1200 BPS)		BR1
3	2400-232C	To set to RS-232C (2400 BPS)		BR2
4	4800-232C	To set to RS-232C (4800 BPS)		BR3
5	9600-232C	To set to RS-232C (9600 BPS)		BR4
6	19200-232C	To set to RS-232C (19200 BPS)		BR5
7	38400-232C	To set to RS-232C (38400 BPS)		BR6

Tips: How to change the SR+/RS-232C setting without entering Service Factory mode
Refer to the section "6.3 USING RS-232C COMMANDS".

6.8 LIST OF RS-232C COMMANDS

RS-232C commands can be used in Service Factory mode.
Before using RS-232C commands, it is necessary to change the factory presetting. See "6.3. USING RS-232C COMMANDS."

Command	Operation	Remarks
A		
ABL	Adjusting power consumption	
B		
BCP	Transmitting the backup data to the DIGITAL Assy	
BR0	UART setting: SR+ (9600 BPS)	Any RS-232C command to the Media Receiver becomes disabled as soon as this command is issued.
BR1	UART setting: RS-232C (1200 BPS)	
BR2	UART setting: RS-232C (2400 BPS)	
BR3	UART setting: RS-232C (4800 BPS)	
BR4	UART setting: RS-232C (9600 BPS)	
BR5	UART setting: RS-232C (19200 BPS)	
BR6	UART setting: RS-232C (38400 BPS)	
BSL	Adjusting side mask B	
BVH	Setting the power supply for the BSD antenna to 15 V	
BVL	Setting the power supply for the BSD antenna to 11 V	
BVM	Setting the power supply for the BSD antenna to 0 V	
BYG	BY GAIN	
C		
CNG	Clearing MR NG information	
CPC	Clearing the power-on counter	
CPD	Clearing power-down information	
CSD	Clearing shutdown information	
D		
DIY	Turning on the on-screen display	While the DIY command is in force, the duration of on-screen display is unlimited.
DIN	Turning off the on-screen display	On-screen display is prohibited.
DOF	Erasing the currently displayed indications	If another command is received by the Media Receiver, an on-screen display is displayed.
DRF	Turning off the power for the drive system	
DRN	Turning on the power for the drive system	
DW*	Decreasing the adjustment value by *	*: 1-9, 0 (0 means 10), or F (making the adjustment value the minimum)
E		
EWN	Prohibiting writing of EDID data	
EWY	Permitting writing of EDID data	
F		
F50	Video 50-Hz sequence	
F60	Video 60-Hz sequence	
F61	PC 60-Hz sequence	
F70	PC 70-Hz sequence	
F72	Video 72-Hz sequence	
F75	Video 75-Hz sequence	
FAJ	Determining the adjustment values for the unit	
FAN	Turning Service Factory mode off	The GUI equivalent to that usually displayed when the power is turned on is displayed.
G		The GET-group commands are effective at any time, including during Standby mode.
GAJ	Obtaining the adjustment values for the panel	
GMM	Switching the gamma levels	Setting value: 000-007
GNG	Obtaining NG data of the MR	
GNM	Obtaining the serial No. of the MR	
GPC	Obtaining the P ON COUNTER value	
GPD	Obtaining power-down information	
GPR	Obtaining the PANEL REVISE data	
GPM	Obtaining the PULSE METER data	
GPW	Obtaining the PANEL W/B data	
GS1	Obtaining the version data for each device	
GS2	Obtaining data on various operations	
GSD	Obtaining shutdown information	
GSL	Adjusting side mask G	

Command	Operation	Remarks
I		
IN1	Input selection: Input 1	
IN2	Input selection: Input 2	
IN3	Input selection: Input 3	
IN4	Input selection: Input 4	
IN5	Input selection: Input 5	
INA	Selection of the tuner for terrestrial analog signals (Antenna A)	
INB	Selection of the tuner for terrestrial analog signals (Antenna B)	
INC	Selection of the tuner for terrestrial digital signals	
IND	Selection of the tuner for satellite digital signals (BS)	
INE	Selection of the tuner for satellite digital signals (CS1)	
INF	Selection of the tuner for satellite digital signals (CS2)	
ING	Selection of iLink input functions	
INF	SD card	
M		
M00	Mask mode: OFF	
M01	White: 0-100%	
M02	Aging mask	
M03	Aging mask (detection of still picture: OFF)	
M10	RAMP slant 1	
M11	RAMP slant 4	
M12	RAMP slant 1 shifting	
M13	RAMP slant 4 shifting	
M14	V RAMP	
M15	H/V RAMP	
M1G	IC1 MAIN GAIN	
M1O	IC1 MAIN OFFSET	
M20	WINDOW-Low: 102 / High: 870	
M21	WINDOW-Low: 102 / High: 1023	
M22	WINDOW-Low: 0 / High: 1023	
M23	WINDOW-High: 1023 (CENTER)	
M24	WINDOW-PEAK WINDOW	Area 1.25%
M25	WINDOW-1/7 vertical window	
M26	WINDOW-magenta/green stripe	
M27	WINDOW-green/magenta stripe	
M28	Window (black & white [1 × 8], checkered pattern [for EMG check])	
M29	Window (for W/B adjustment, magenta, yellow)	
M2E	Wiper to prevent phosphor burn	
M30	COLOR BAR	
M31	Slanted lines	
M51	Raster-white	
M52	Raster-red	
M53	Raster-green	
M54	Raster-blue	
M55	Raster-black	
M56	Raster-cyan	
M57	Raster-magenta	
M58	Raster-yellow	
M59	Raster-cyan 274	
M60	Raster-50 flesh color	
M61	Raster-50 light purple	
M62	Raster-50 sky blue	
M63	Raster-red 779	
M64	Raster-cyan 218	
M65	Raster-cyan 448	
M66	Raster-43 flesh color	
M67	Raster-red 640	
M68	Raster-magenta 98	
M69	Raster-43 sky blue 1	
M70	Raster-43 sky blue 2	
M71	Raster-43 light purple	
M72	Raster-blue 960	
M73	Raster-gray 511 (spare)	
M74	Raster-gray 511 (spare)	

Command	Operation	Remarks
M		
MRG	AD MAIN R GAIN	
MRO	AD MAIN R OFFSET	
MGG	AD MAIN G GAIN	
MGO	AD MAIN G OFFSET	
MBG	AD MAIN B GAIN	
MBO	AD MAIN B OFFSET	
P		
PBH	Panel W/B B-HIGH adjustment	
PBL	Panel W/B B-LOW adjustment	
PGH	Panel W/B G-HIGH adjustment	
PGL	Panel W/B G-LOW adjustment	
POF	Turning the power OFF	
PRH	Panel W/B R-HIGH adjustment	
PRL	Panel W/B R-LOW adjustment	
R		
RYG	RY GAIN	
RSL	Adjustment of side mask R	
S		
S1G	IC1 SUB GAIN	
S1O	IC1 SUB OFFSET	
SBG	AD SUB B GAIN	
SBO	AD SUB B OFFSET	
SFI	Initialization of the full mask table	
SGG	AD SUB G GAIN	
SGO	AD SUB G OFFSET	
SRG	AD SUB R GAIN	
SRO	AD SUB R OFFSET	
T		
TSY	Enabling the TRAP switch	The command is effective even during Standby mode.
U		
UP*	Increasing the adjustment value by *	*: 1-9, 0 (0 means 10), or F (making the adjustment value the maximum)
UAJ	Resetting all data in the DIGITAL Assy to those of a new service part	
V		
VOF	Offset voltage adjustment	
VSU	SUS voltage adjustment	
X		
XD1	D1 trailing-edge pulse of X-SUS	
XD2	D2 trailing-edge pulse of X-SUS	
XU1	U1 leading-edge pulse of X-SUS	
XU2	U2 leading-edge pulse of X-SUS	
Y		
YD1	D1 trailing-edge pulse of Y-SUS	
YD2	D2 trailing-edge pulse of Y-SUS	
YD3	D3 trailing-edge pulse of Y-SUS	
YD4	D4 trailing-edge pulse of Y-SUS	
YU1	U1 leading-edge pulse of Y-SUS	
YU2	U2 leading-edge pulse of Y-SUS	

6.9 OUTLINE OF COMMANDS

■ GET Commands

GS1: Returning information on the model and the version of the software

Order	Data	Size
1	Data on the display	3 bytes
2	Version of the module microcomputer	4 bytes
3	Version of the IC4-MANTA	4 bytes
4	Sequence version (50VIDEO)	4 bytes
5	Sequence version (50PC)	4 bytes
6	Sequence version (43VIDEO)	4 bytes
7	Sequence version (43PC)	4 bytes
8	Version of the IF microcomputer	4 bytes
9	Version of the main microcomputer	4 bytes
10	Version of the IC3-MANTA	4 bytes
11	Version of the OSD	4 bytes
12	Version of the DTV microcomputer (only for models for North America)	4 bytes
13	Version of the CC microcomputer (only for models for North America)	4 bytes
14	Version of the TEXT microcomputer (only for models for Europe)	4 bytes

Breakdown of the data on the display

Data	Model
HD5	PDP-504HD series
HD4	PDP-434HD series

GPM: Returning the data of the PDP pulse meter

Order	Data	Size
1	Pulse meter (Block area 1)	10 bytes
2	Pulse meter (Block area 2)	10 bytes
3	Pulse meter (Block area 3)	10 bytes
4	Pulse meter (Block area 4)	10 bytes
5	Pulse meter (Block area 5)	10 bytes

Note: Refer to the service manual of the panel.

GPC: Returning the cumulative number of times the power to the PDP was turned on

Order	Data	Size
1	Power-on counter	8 bytes

• Commands for clearing the logs

Parameter	Corresponding RS-232C Command
PD INFO	CPD
SD INFO	CSD
NG INFO	CNG
HOUR METER	CHM
MR HOUR METER (Only for the system model)	CHR
PULSE METER	CPM
P ON COUNTER	CPC

GPD: Returning the power-down data (log) of the PDP

Order	Data	Size	Order	Data	Size
1	Latest "1st PD" data	1 byte	17	Fifth latest “1st PD” data	1 byte
2	Latest "2nd PD" data	1 byte	18	Fifth latest “2nd PD” data	1 byte
3	Data of hour meter for the latest PD	7 bytes	19	Data of hour meter for the fifth latest PD	7 bytes
4	Data on temperature for the latest PD (TEMP1)	3 bytes	20	Data on temperature for the fifth latest PD (TEMP1)	3 bytes
5	Second latest “1st PD” data	1 byte	21	Sixth latest “1st PD” data	1 byte
6	Second latest “2nd PD” data	1 byte	22	Sixth latest “2nd PD” data	1 byte
7	Data of hour meter for the second latest PD	7 bytes	23	Data of hour meter for the sixth latest PD	7 bytes
8	Data on temperature for the second latest PD (TEMP1)	3 bytes	24	Data on temperature for the sixth latest PD (TEMP1)	3 bytes
9	Third latest “1st PD” data	1 byte	25	Seventh latest “1st PD” data	1 byte
10	Third latest “2nd PD” data	1 byte	26	Seventh latest “2nd PD” data	1 byte
11	Data of hour meter for the third latest PD	7 bytes	27	Data of hour meter for the seventh latest PD	7 bytes
12	Data on temperature for the third latest PD (TEMP1)	3 bytes	28	Data on temperature for the seventh latest PD (TEMP1)	3 bytes
13	Fourth latest “1st PD” data	1 byte	29	Eighth latest “1st PD” data	1 byte
14	Fourth latest “2nd PD” data	1 byte	30	Eighth latest “2nd PD” data	1 byte
15	Data of hour meter for the fourth latest PD	7 bytes	31	Data of hour meter for the eighth latest PD	7 bytes
16	Data on temperature for the fourth latest PD (TEMP1)	3 bytes	32	Data on temperature for the eighth latest PD (TEMP1)	3 bytes

• Details on "1st/2nd PD" data

Data	Power-down Point
0	No power-down
1	Not used (for MR-POWER)
2	P-POWER
3	SCAN
4	SCN-5V
5	Y-DRIVE
6	Y-DCDC
7	Y-SUS
8	ADRS
9	X-DRIVE
A	X-DCDC
B	X-SUS
C	DIG-DCDC
D, E	Spare
F	Power-down point not identified

GSD: Returning the shutdown data (log) of the PDP

Order	Data	Size	Order	Data	Size
1	Latest SD data	1 byte	17	Fifth latest SD data	1 byte
2	Data of subcategory for the latest SD	1 byte	18	Data of subcategory for the fifth latest SD	1 byte
3	Data of hour meter for the latest SD	7 bytes	19	Data of hour meter for the fifth latest SD	7 bytes
4	Data on temperature for the latest SD (TEMP1)	3 bytes	20	Data on temperature for the fifth latest SD (TEMP1)	3 bytes
5	Second latest SD data	1 byte	21	Sixth latest SD data	1 byte
6	Data of subcategory for the second latest SD	1 byte	22	Data of subcategory for the sixth latest SD	1 byte
7	Data of hour meter for the second latest SD	7 bytes	23	Data of hour meter for the sixth latest SD	7 bytes
8	Data on temperature for the second latest SD (TEMP1)	3 bytes	24	Data on temperature for the sixth latest SD (TEMP1)	3 bytes
9	Third latest SD data	1 byte	25	Seventh latest SD data	1 byte
10	Data of subcategory for the third latest SD	1 byte	26	Data of subcategory for the seventh latest SD	1 byte
11	Data of hour meter for the third latest SD	7 bytes	27	Data of hour meter for the seventh latest SD	7 bytes
12	Data on temperature for the third latest SD (TEMP1)	3 bytes	28	Data on temperature for the seventh latest SD (TEMP1)	3 bytes
13	Fourth latest SD data	1 byte	29	Eighth latest SD data	1 byte
14	Data of subcategory for the fourth latest SD	1 byte	30	Data of subcategory for the eighth latest SD	1 byte
15	Data of hour meter for the fourth latest SD	7 bytes	31	Data of hour meter for the eighth latest SD	7 bytes
16	Data on temperature for the fourth latest SD (TEMP1)	3 bytes	32	Data on temperature for the eighth latest SD (TEMP1)	3 bytes

• Details on the shutdown data

Data	Cause of Shutdown
0	No abnormality
1	IC4 (IC5401)
2	Module microcomputer IIC
3	Abnormality in RST2 (power decrease of DC-DC converter)
4	Panel having abnormally high temperature
5	Audio failure (short-circuiting of the speakers)
6 - F	Spares

• Data on the shutdown subcategories for the module microcomputer IIC

Data	Cause of Shutdown
0	No subcategory
1	EEPROM (4k) (IC5206)
2	EEPROM (2k) (IC4002)
3	Volume IC (IC3502)

GNG: Returning the data (logs) on power-down and shutdown of the Media Receiver

Order	Data	Size	Order	Data	Size
1	Latest NG data	1 byte	17	Fifth latest NG data	1 byte
2	Data of subcategory for the latest NG	1 byte	18	Data of subcategory for the fifth latest NG	1 byte
3	Data of MR hour meter for the latest NG	7 bytes	19	Data of MR hour meter for the fifth latest NG	7 bytes
4	Data on temperature for the latest NG (TEMP2)	3 bytes	20	Data on temperature for the fifth latest NG (TEMP2)	3 bytes
5	Second latest NG data	1 byte	21	Sixth latest NG data	1 byte
6	Data of subcategory for the second latest NG	1 byte	22	Data of subcategory for the sixth latest NG	1 byte
7	Data of MR hour meter for the second latest NG	7 bytes	23	Data of MR hour meter for the sixth latest NG	7 bytes
8	Data on temperature for the second latest NG (TEMP2)	3 bytes	24	Data on temperature for the sixth latest NG (TEMP2)	3 bytes
9	Third latest NG data	1 byte	25	Seventh latest NG data	1 byte
10	Data of subcategory for the third latest NG	1 byte	26	Data of subcategory for the seventh latest NG	1 byte
11	Data of MR hour meter for the third latest NG	7 bytes	27	Data of MR hour meter for the seventh latest NG	7 bytes
12	Data on temperature for the third latest NG (TEMP2)	3 bytes	28	Data on temperature for the seventh latest NG (TEMP2)	3 bytes
13	Fourth latest NG data	1 byte	29	Eighth latest NG data	1 byte
14	Data of subcategory for the fourth latest NG	1 byte	30	Data of subcategory for the eighth latest NG	1 byte
15	Data of MR hour meter for the fourth latest NG	7 bytes	31	Data of MR hour meter for the eighth latest NG	7 bytes
16	Data on temperature for the fourth latest NG (TEMP2)	3 bytes	32	Data on temperature for the eighth latest NG (TEMP2)	3 bytes

• Details on the NG data

Data	Cause of Shutdown
0	No abnormality
1	Power-down of the MR power supply
2	Communication failure of the module microcomputer
3	Three-wire serial communication failure of the main microcomputer
4	IIC communication failure of the main microcomputer
5	Communication failure of the main microcomputer
6	MR having abnormally high temperature
7	Fan stopped
8	Failure in the digital tuner
9	Abnormality in RST2 of the MR (power decrease of DC-DC converter)

• Data on the subcategories for failure in 3-wire serial communication of the main microcomputer

Data	Cause of Shutdown
0	No subcategory
1	Communication failure of the IF microcomputer
2	IC2 communication failure
3	IC3 communication failure

• Data on the subcategories for failure in the digital tuner

Data	Cause of Shutdown
0	No subcategory (DTV for North America)
1	Communication failure of the BSD microcomputer (PS/RST)
2	BSD microcomputer (RETRY)
3	BSD unit (DEVICE)
4	PC CARD
5	
6	

• Data on the subcategories for failure in IIC communication of the main microcomputer

Data	Cause of Shutdown
0	No subcategory
1	EEPROM (128k) (IC7205)
2	GCR (Only domestic model)
3	IC1 main (IC6107)
4	IC1 sub (IC6255)
5	AD-PLL main (IC6402)
6	AD-PLL sub (IC6602)
7	IC6 (IC6951)
8	HDMI1
9	Not used
A	7-3VIDEO SW (IC8002)
B	6-2RGB SW (IC8005)
C	Front end 1 (U7501)
D	Not used
E	Not used
F	Not used
G	Not used
H	Not used
I	NICAM-NG (IC7702)
K	TX-COM (IC8904)
L	TX-DEV (IC8904)
M	TX-MEM (IC8904 or IC9101 or IC9104)

GAJ: Returning drive-related adjustment values of the PDP

Order	Data	Size
1	Currently used ABL table	3 bytes
2	Upper limit of the electric power	3 bytes
3	Vsus adjustment value	3 bytes
4	Vofs adjustment value	3 bytes
5	X-SUS-U1 adjustment value (XU1)	3 bytes
6	X-SUS-U2 adjustment value (XU2)	3 bytes
7	X-SUS-D2 adjustment value (XD2)	3 bytes
8	X-SUS-D1 adjustment value (XD1)	3 bytes
9	Y-SUS-U1 adjustment value (YU1)	3 bytes
10	Y-SUS-U2 adjustment value (YU2)	3 bytes
11	Y-SUS-D1-2 adjustment value (YD2)	3 bytes
12	Y-SUS-D1-1 adjustment value (YD1)	3 bytes
13	Y-SUS-D2-2 adjustment value (YD4)	3 bytes
14	Y-SUS-D2-1 adjustment value (YD3)	3 bytes

Data	Table
AB1	ABL table for NTSC
AB2	ABL table for PAL
AB3	ABL table for PC

GPW: Returning RGB-level-related adjustment values of the PDP

Order	Data	Size
1	Panel W/B table currently used	3 bytes
2	Main contrast	4 bytes
3	Red contrast of the W/B adjustment value	4 bytes
4	Green contrast of the W/B adjustment value	4 bytes
5	Blue contrast of the W/B adjustment value	4 bytes
6	Main brightness	4 bytes
7	Red brightness of the W/B adjustment value	4 bytes
8	Green brightness of the W/B adjustment value	4 bytes
9	Blue brightness of the W/B adjustment value	4 bytes

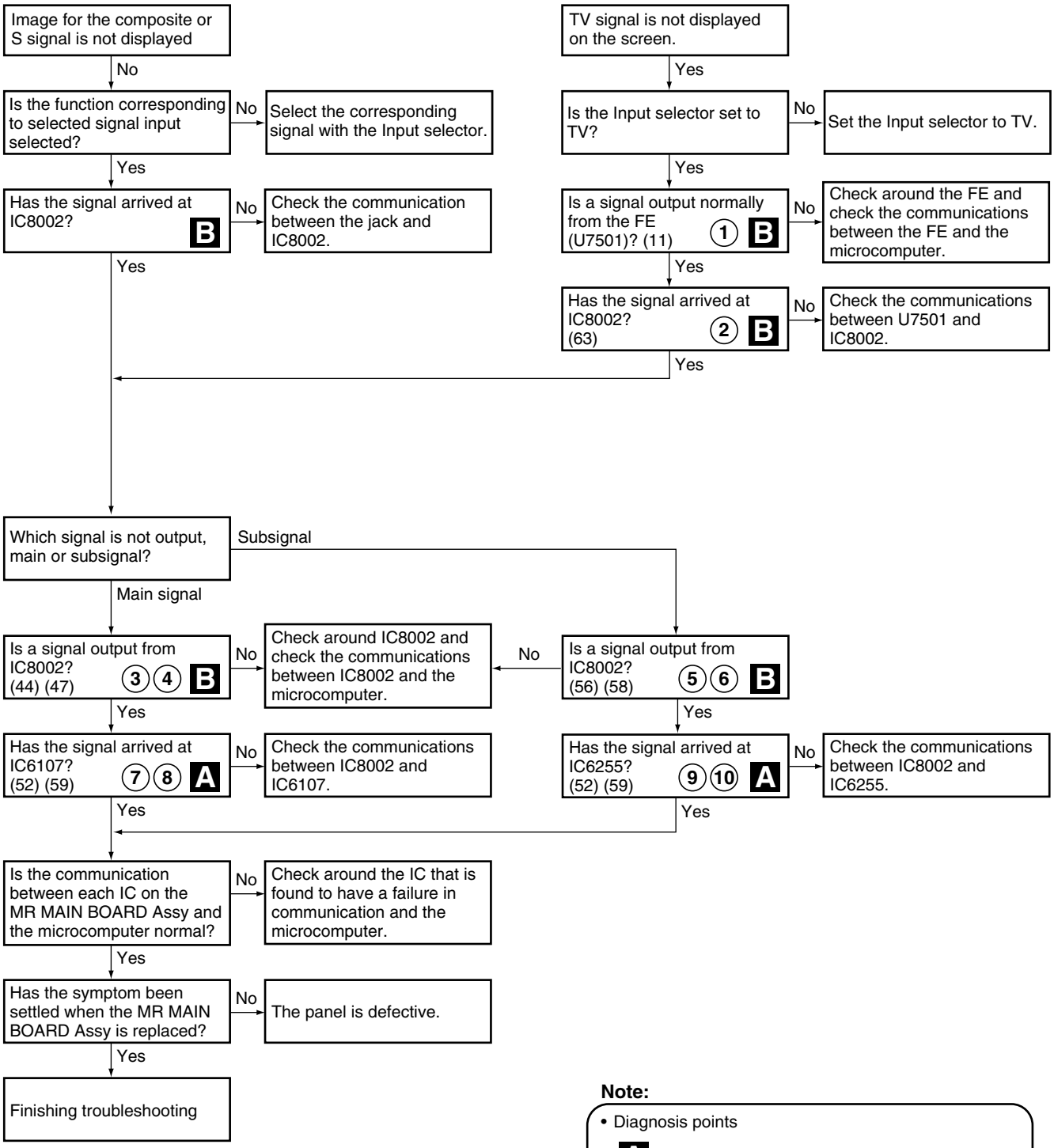
Data	Table
PT1	ABL table for NTSC
PT2	ABL table for PAL
PT3	Reserved table

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 TROUBLE SHOOTING

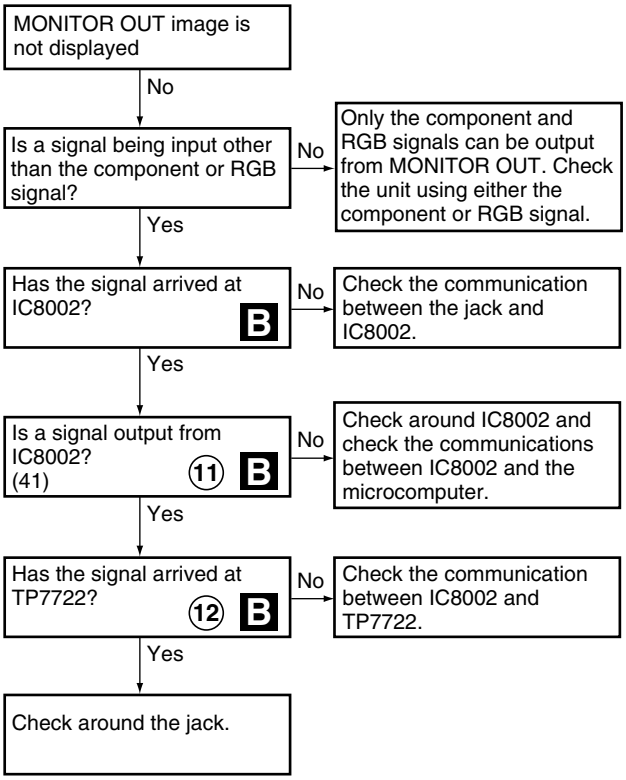
● Image for the composite or S signal is not displayed



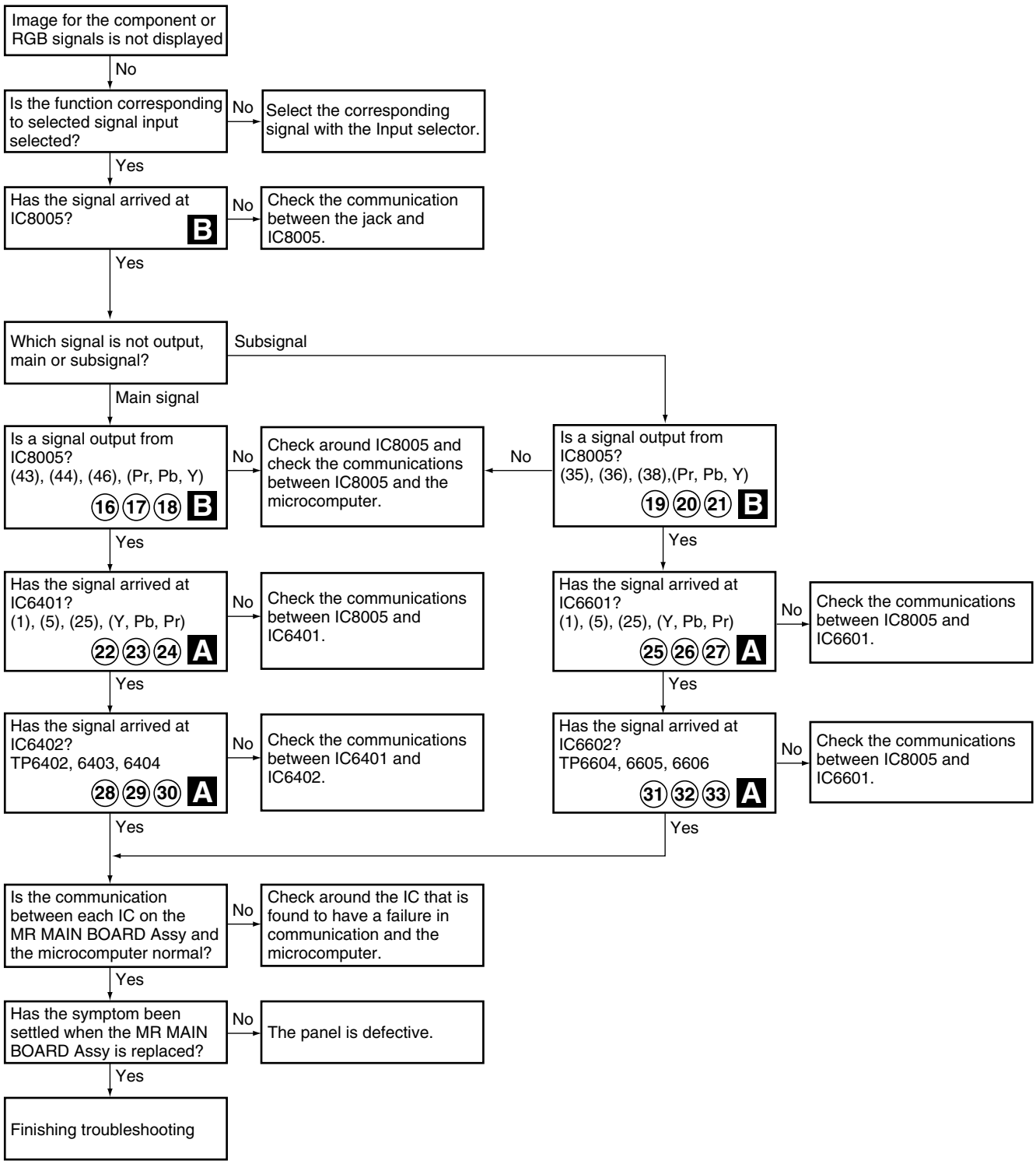
Note:

- Diagnosis points
  - **A MR MAIN BOARD ASSY**
  - **B AV BOARD ASSY**
- For check the communication with the microcomputer, refer to the section 6.7 SERVICE FACTORY MODE.
- The encircled numbers denote measuring point in the Waveforms for Troubleshooting.

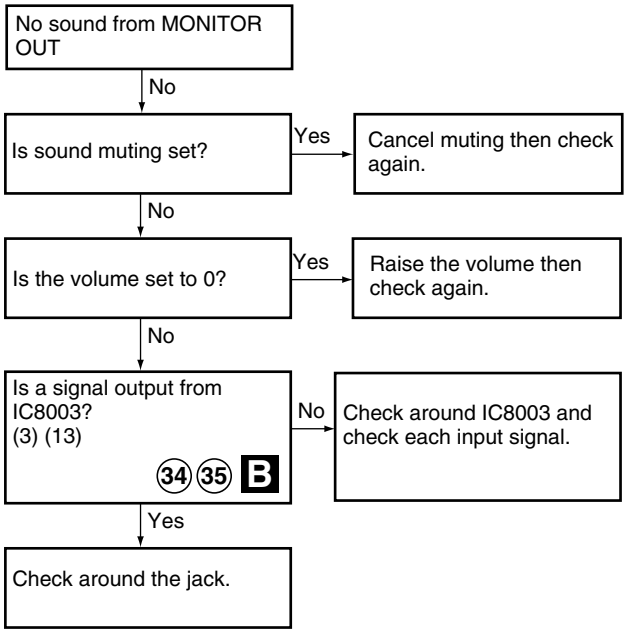
● MONITOR OUT image is not displayed



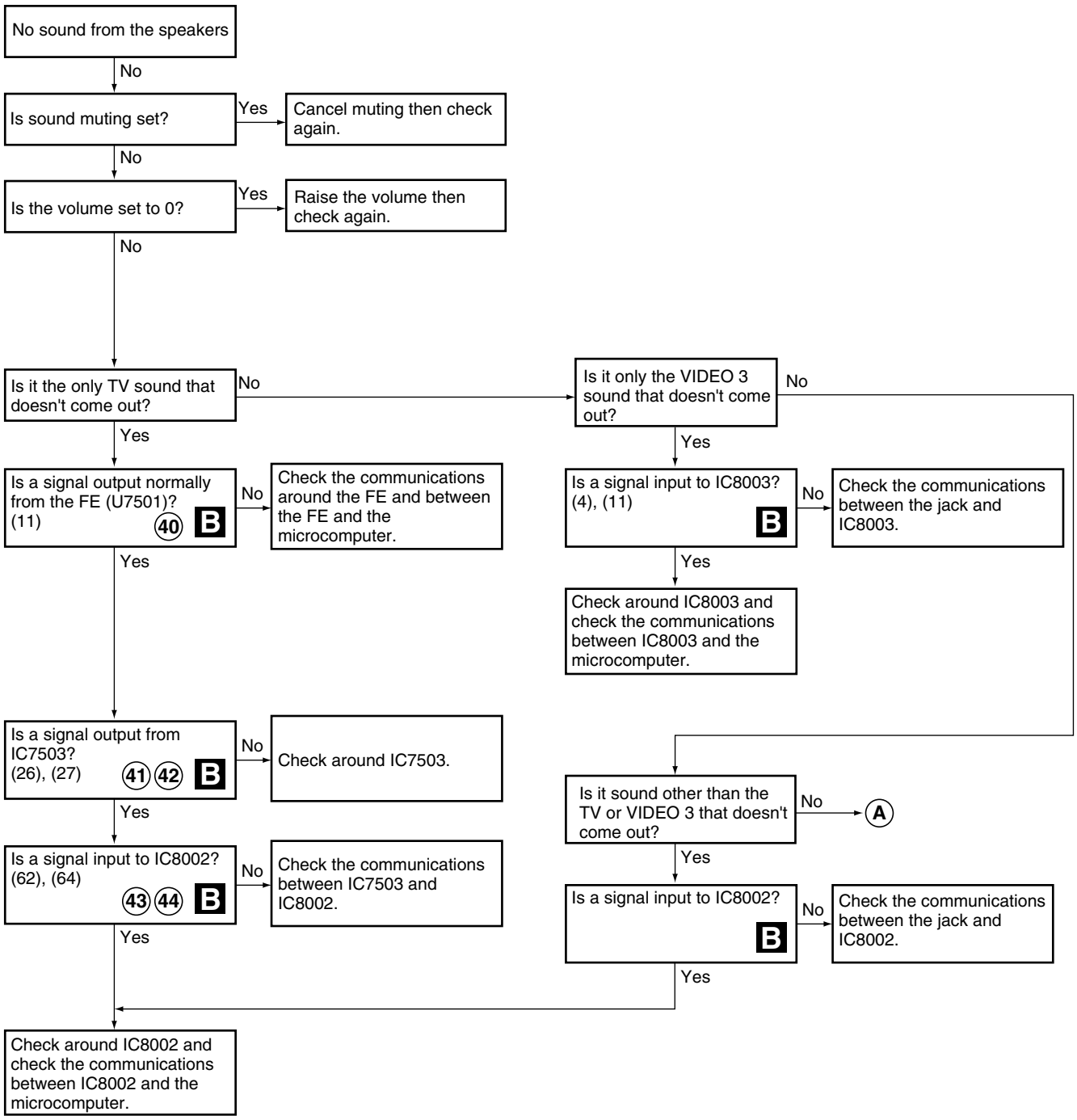
● Image for the component or RGB signals is not displayed



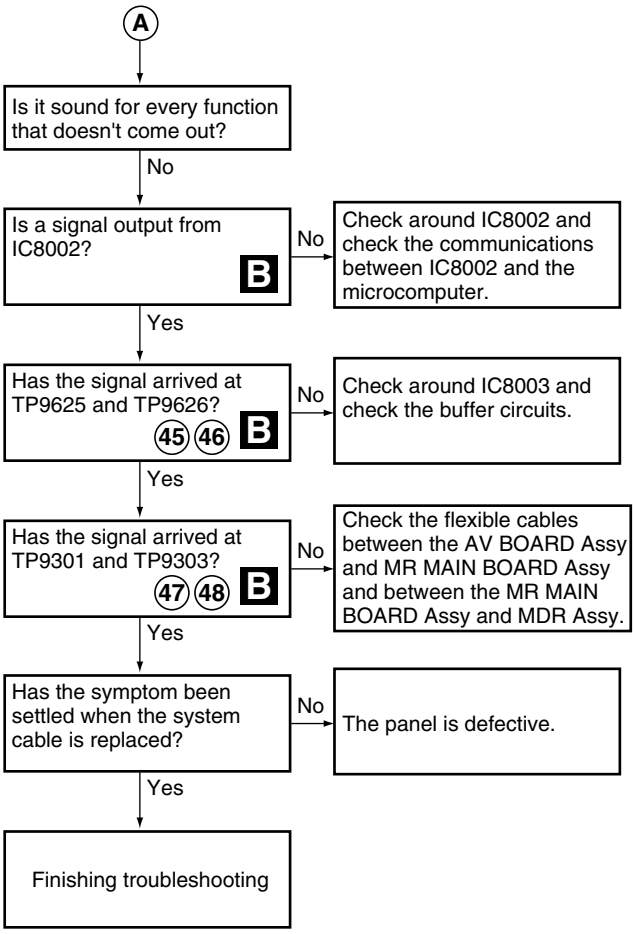
● No sound


No sound from MONITOR OUT
No
Is sound muting set?
Yes
Cancel muting then check again.
No
Is the volume set to 0?
Yes
Raise the volume then check again.
No
Is a signal output from IC8003?
(3) (13)
34 35 B
No
Check around IC8003 and check each input signal.
Yes
Check around the jack.

● No sound from the speakers (1/2)

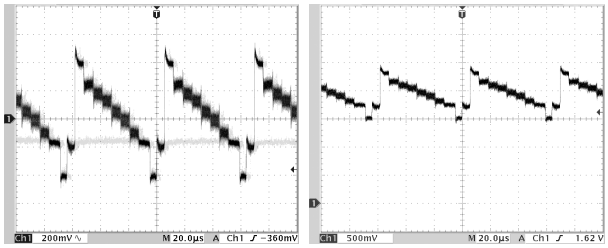


● **No sound from the speakers (2/2)**

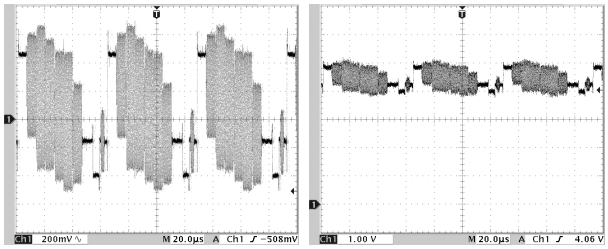


A B C D E F

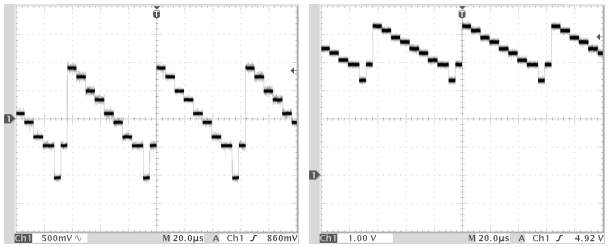
1 U7501 - pin 19



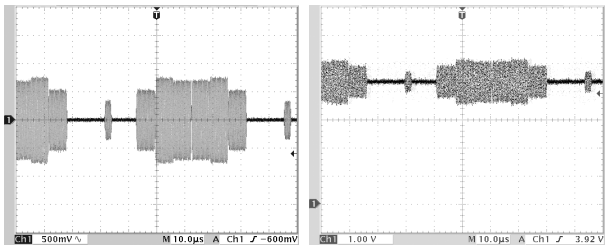
2 IC8002 - pin 63



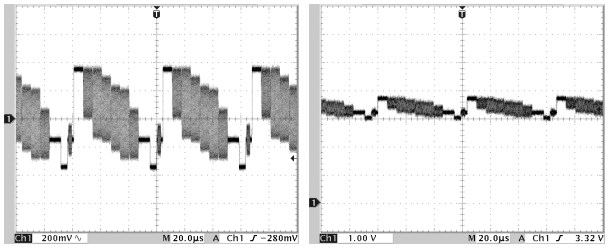
3 IC8002 - pin 44



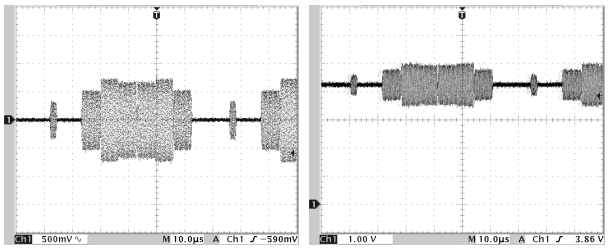
4 IC8002 - pin 47



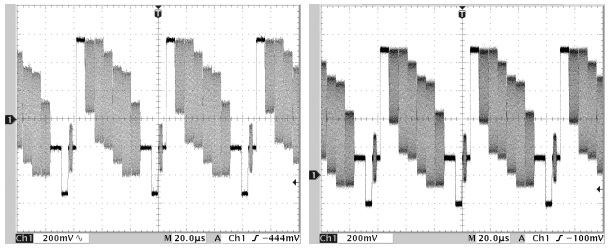
5 IC8002 - pin 56



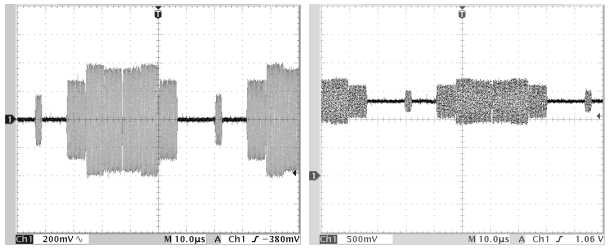
6 IC8002 - pin 58



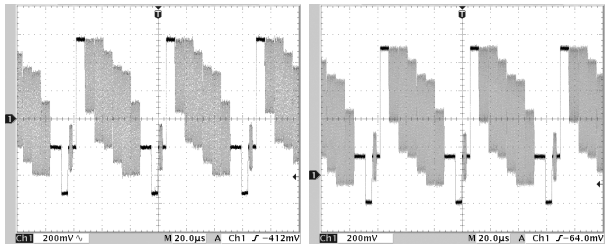
7 IC6107 - pin 52



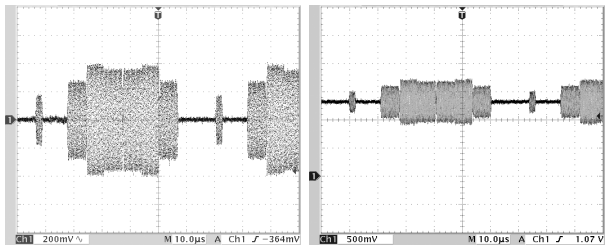
8 IC6107 - pin 59



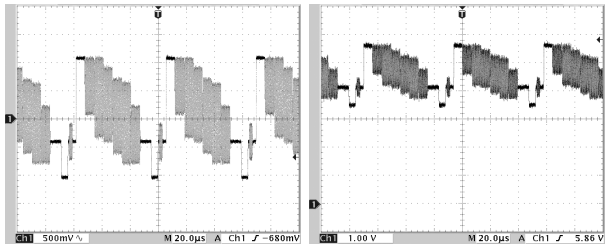
9 IC6255 - pin 52



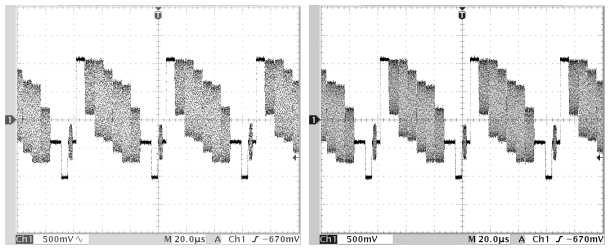
10 IC6255 - pin 59



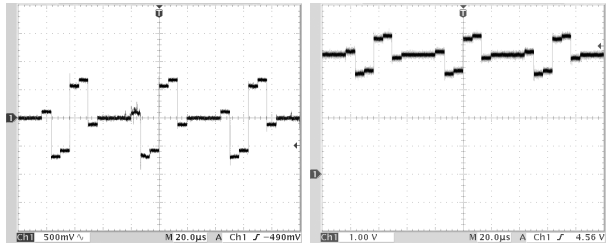
11 IC8002 - pin 41



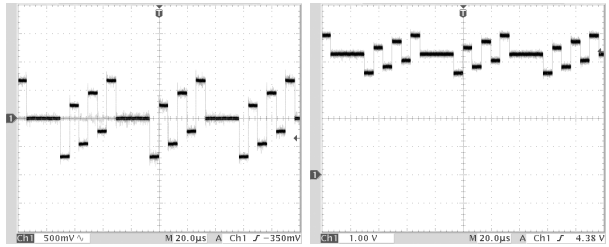
12 TP7722



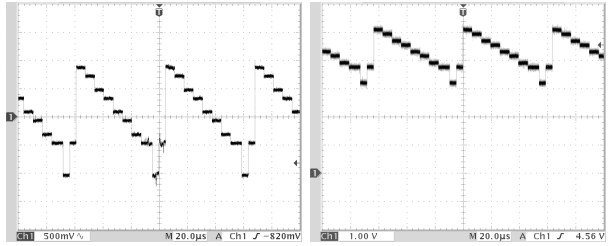
(19) IC8005 - pin 35



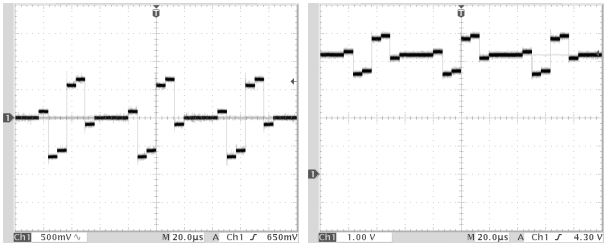
(20) IC8005 - pin 36



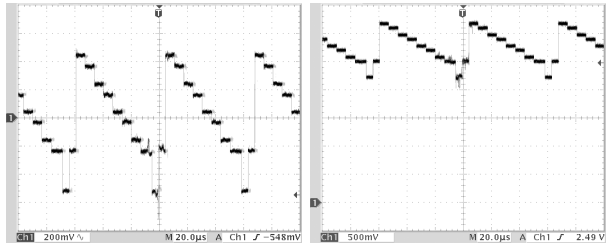
(21) IC8005 - pin 38



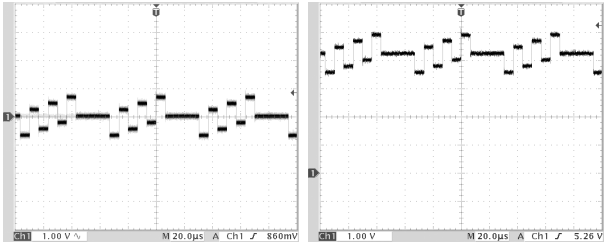
(16) IC8005 - pin 43



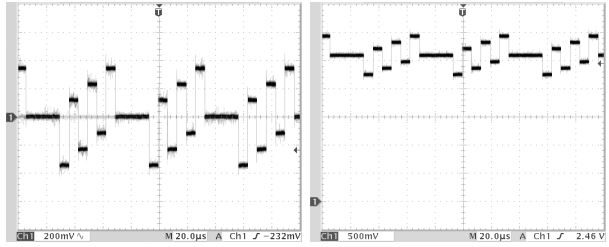
(22) IC6401 - pin 1



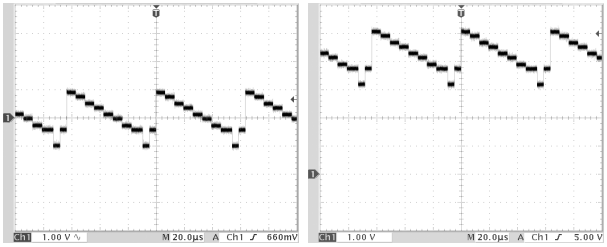
(17) IC8005 - pin 44



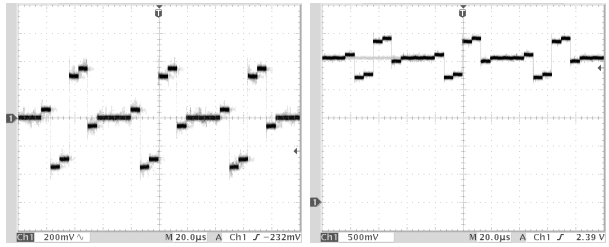
(23) IC6401 - pin 5



(18) IC8005 - pin 46

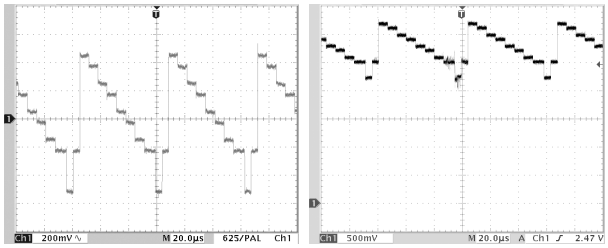


(24) IC6401 - pin 25

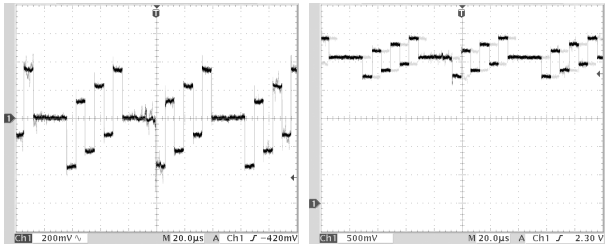


A B C D E F

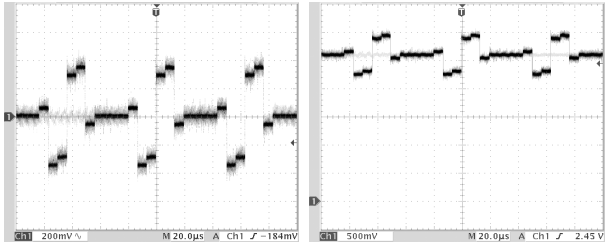
25 IC6601 - pin 1



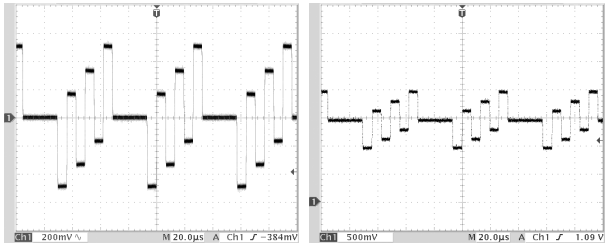
26 IC6601 - pin 5



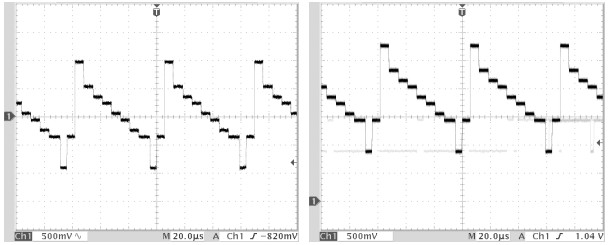
27 IC6601 - pin 25



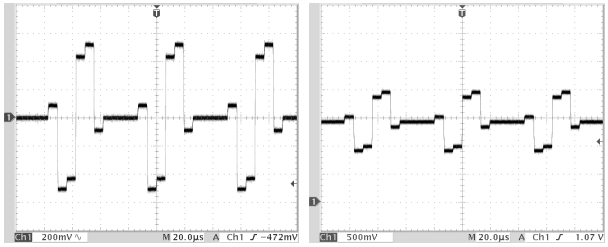
28 TP6402



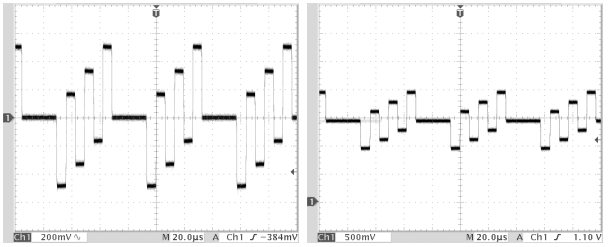
29 TP6403



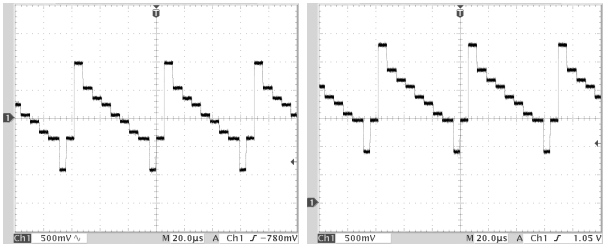
30 TP6404



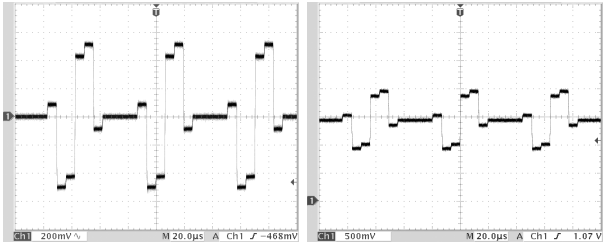
31 TP6604



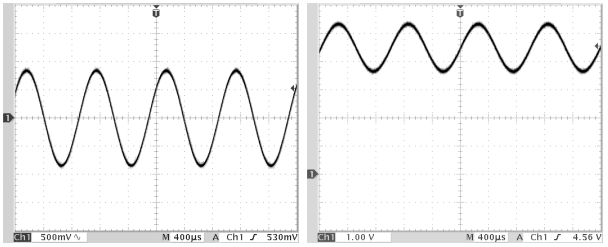
32 TP6605



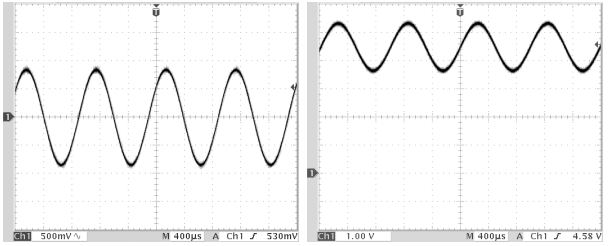
33 TP6606



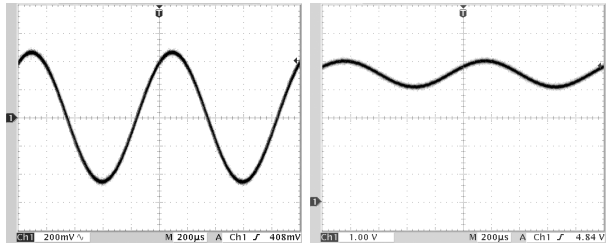
34 IC8003 - pin 3



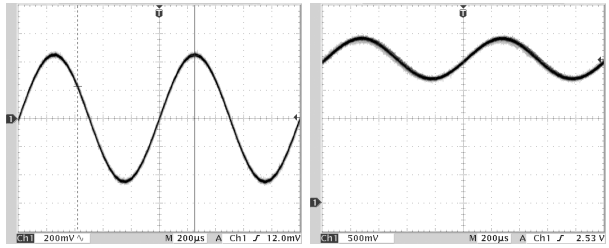
35 IC8003 - pin 13



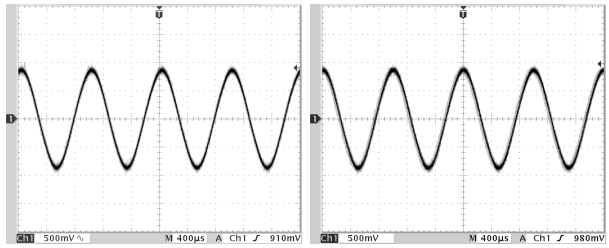
(43) IC8002 - pin 62



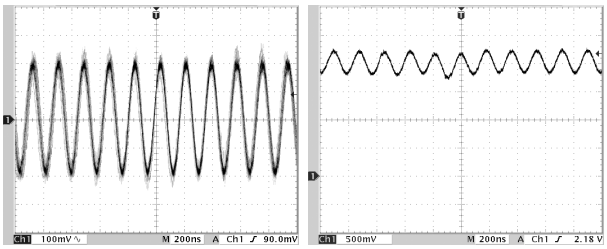
(44) IC8002 - pin 64



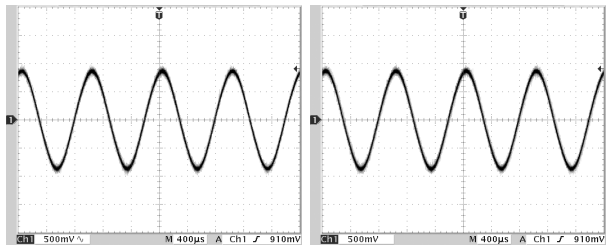
(45) TP9625



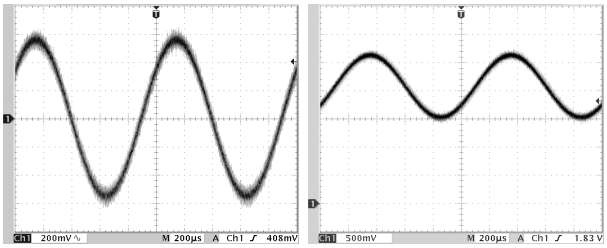
(40) U7501 - pin 16



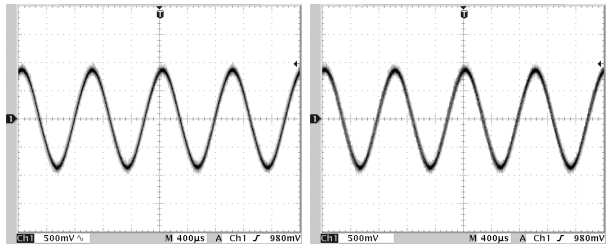
(46) TP9626



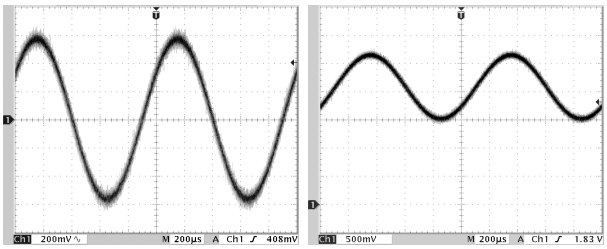
(41) IC7503 - pin 22



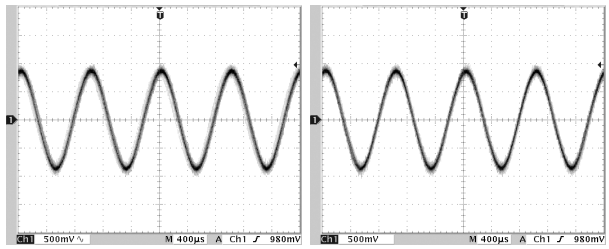
(47) TP9301



(42) IC7503 - pin 23



(48) TP9303



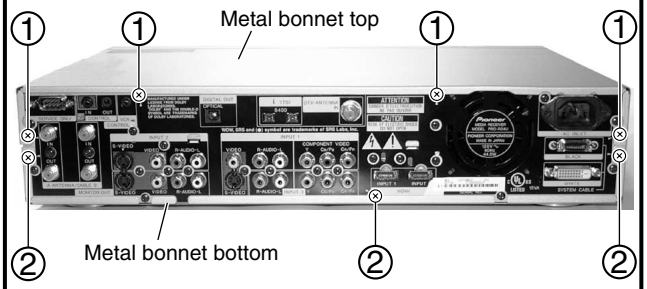
7.1.2 DISASSEMBLY

1 Metal bonnet top and bottom

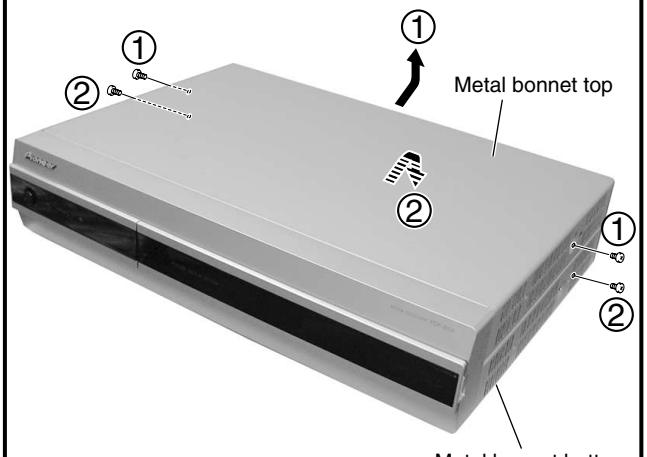
① Remove the metal bonnet top by removing the six screws.

② Remove the metal bonnet bottom by removing the five screws.

Caution :
Please remove it after pulling it in a rear direction because metal bonnet top and bottom are hard to reduce.



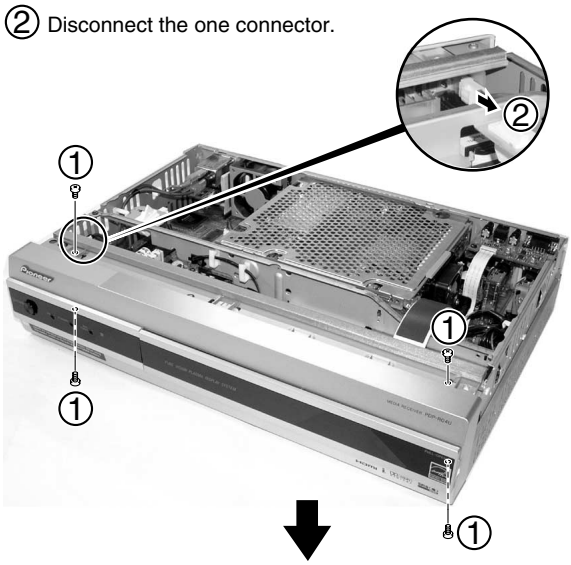
● **Rear view**



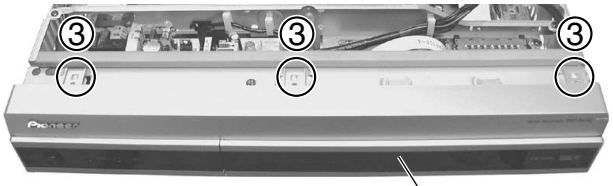
2 Front panel section

① Remove the four screws.

② Disconnect the one connector.

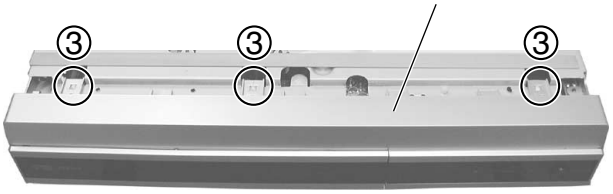


③ Remove the six hooks.



● **Top view**

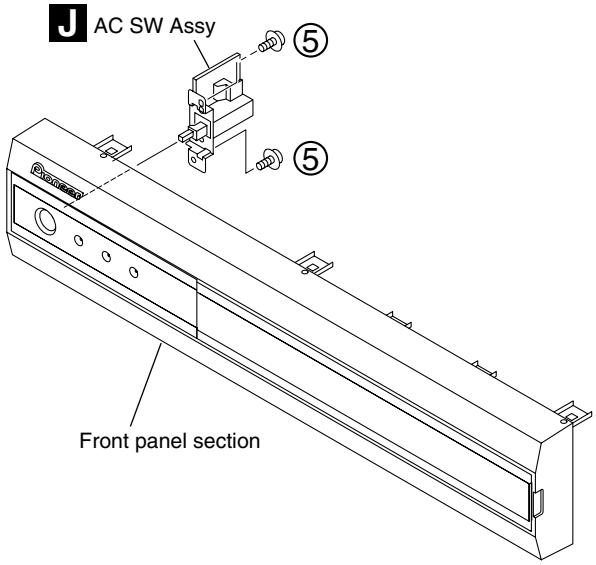
Front panel section



● **Bottom view**

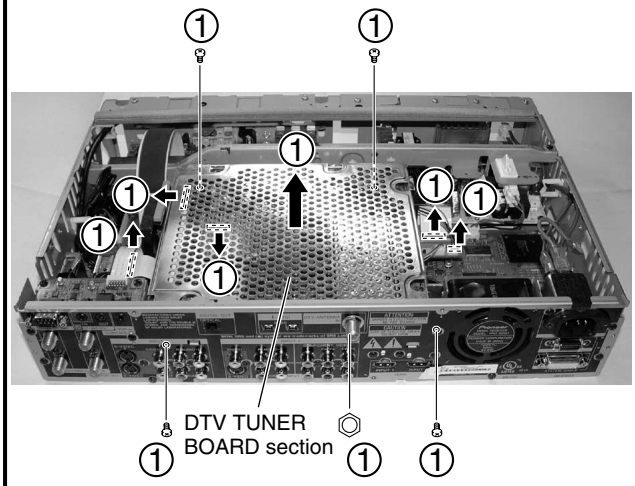
④ Remove the front panel section.

⑤ Remove the AC SW Assy by removing the two screws.



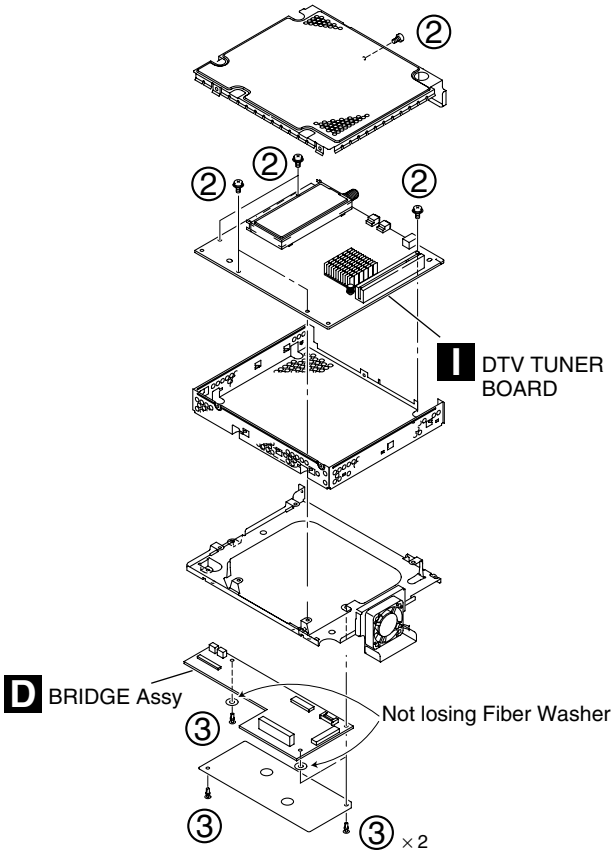
3 DTV TUNER BOARD

① Remove DTV TUNER BOARD section by removing the four screws and the one nut.
Disconnect the three connectors and the two flexible cable.



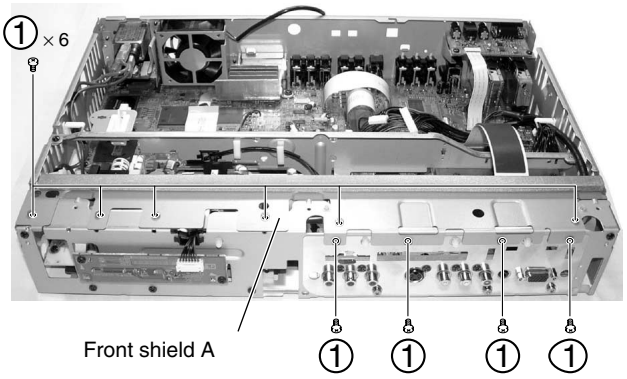
② Remove DTV TUNER BOARD by removing the six screws.

③ Remove BRIGE Assy by removing the four Nyron Rivets.

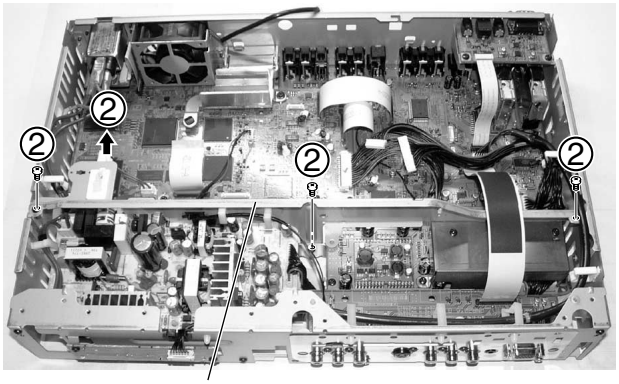


4 Front shield A and Center stay

① Remove the front shield A by removing the ten screws.



② Disconnect the one connector.
Remove the center stay by removing the three screws.



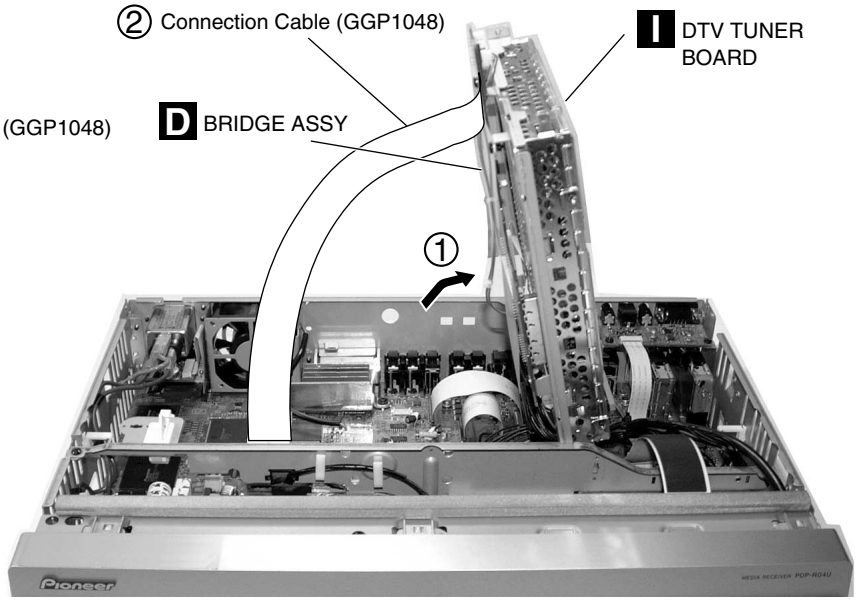
Diagnosis method of PCB Assy

Note When diagnosing the unit, be sure to use the connection cable for service. (Part No : GGP1048)

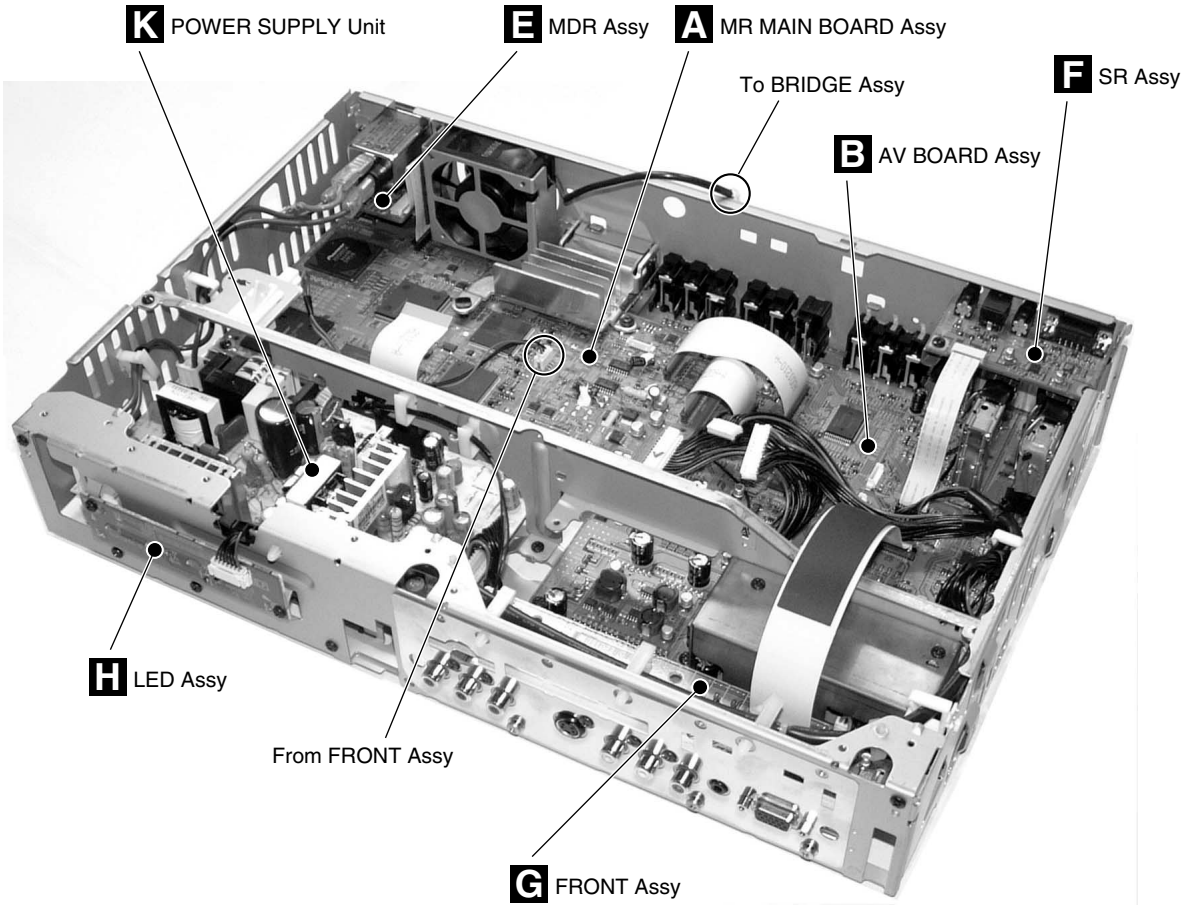
① Remove the four screws and the one nut.
Disconnect the one flexible cable (J201) from MR MAIN BOARD ASSY
and the one connector from Fan Motor.
Raise DTV TUNER BOARD section.

② Connect the Connection Cables for Service (GGP1048)

③ Diagnosis



PCB Location

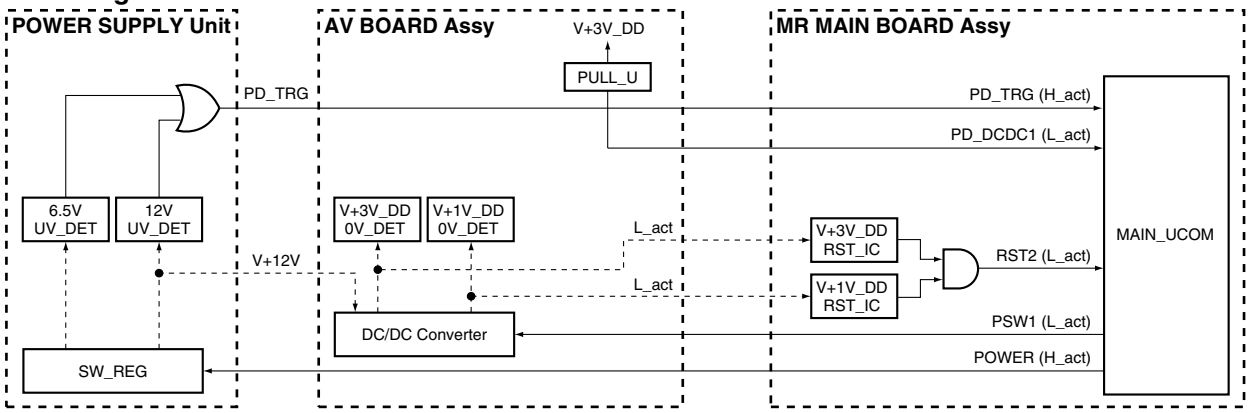


7.2 EXPLANATION

7.2.1 PROCESSING IN ABNORMALITY

Power supply and DC-DC converter

● **Circuit diagram**

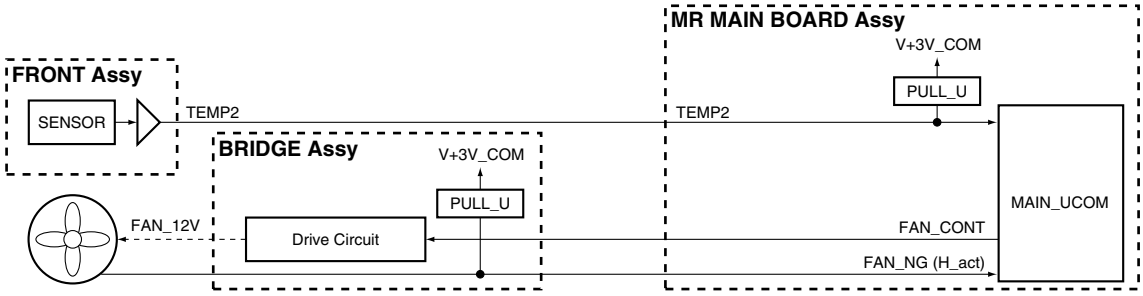


● **Specifications for port monitoring**

Port Name	SD/PD Indication	Assigned Pin	Active
PD_MAIN (PD_TRG)	MR_PWR	38	Power-down with H
PD_DCDC1	ASIC power supply	43	Shutdown with L
RST2	ASIC power supply	98	Shutdown with L

Fan and temperature sensor

● **Circuit diagram**

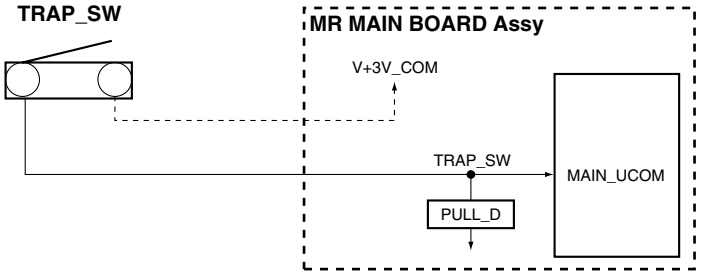


● **Specifications for port monitoring**

Port Name	SD/PD Indication	Assigned Pin	Active
FAN_NG	FAN	31	Shutdown with H
TEMP2	Abnormally high temperature in the MR	50	Shutdown when the value exceeds the predetermined value

TRAP_SW

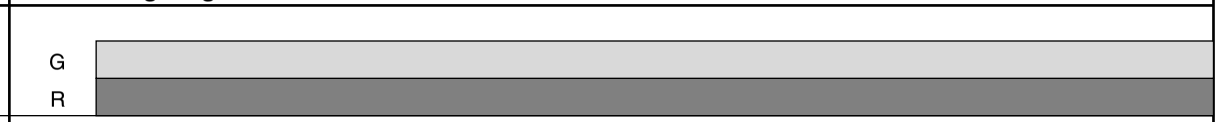
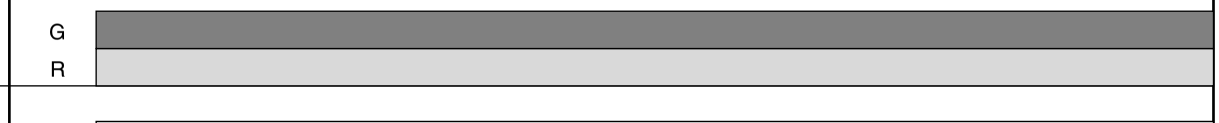
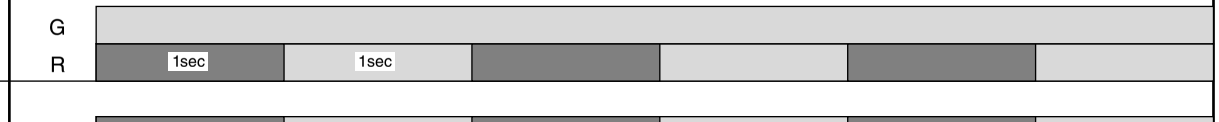
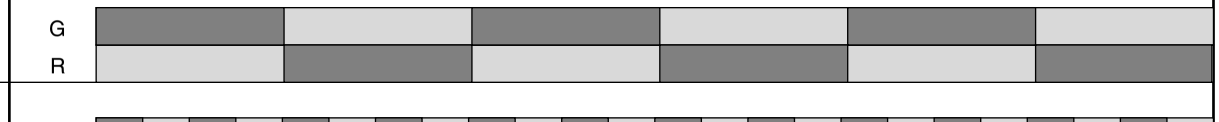
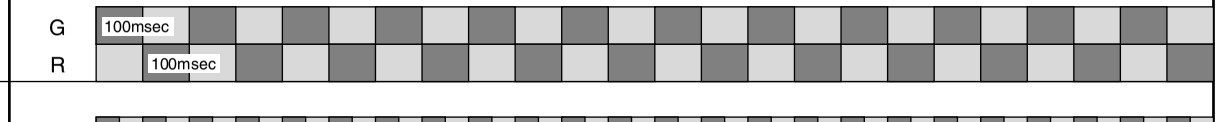
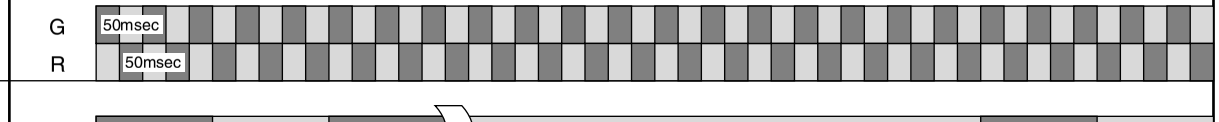
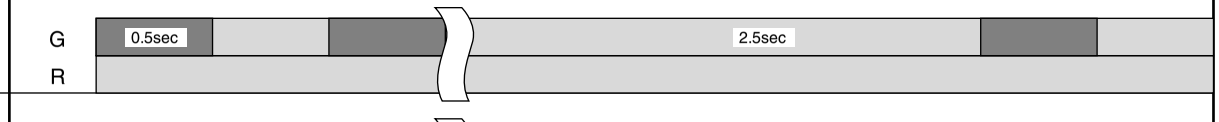
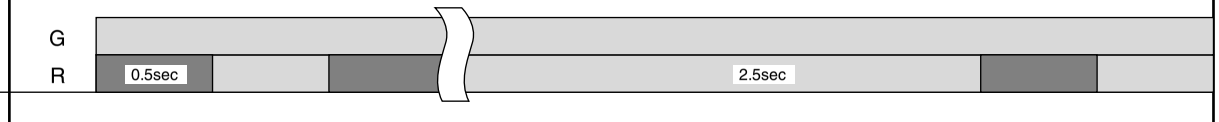
● Circuit diagram



● Specifications for port monitoring

Port Name	SD/PD Indication	Assigned Pin	Active
TRAP_SW	Modification tried	30	OFF with H

LED-lighting patterns

Status of the Unit		LED-lighting Pattern
Standby, power management	Lit in red	
Power on	Lit in green	
PDP's power not on	Flashing in red (at 1-sec intervals)	
System cable disconnected *	Flashing alternately in red and green (at 1-sec intervals)	
Waiting for start of rewriting by the microcomputer		
Waiting for finish of rewriting by the microcomputer		
Shutdown (circuit protection)	Flashing in green n times (initially at 0.5-sec intervals then 2.5-sec intervals)	
Power-down (circuit protection)	Flashing in red for n times (initially at 0.5-sec intervals then 2.5-sec intervals)	
TRAP switch operation		

* In this case, the red and green areas on the screen of the panel flash alternately.

■ Defective points assumed from the number of times of LED flashing

No. of times of LED flashing				Category *1	Site detected as defective	Possible defective points (representative examples)	OSD when detected (warning message)
LEDs on the panel		LEDs on the MR					
RED	GRN	RED	GRN				
	Green 1	Red		SD	Panel drive IC	*2	None
	Green 2	Red			Module section IIC	*2	None
	Green 3	Red			Power decrease of DIGITAL-DC-DC	*2	None
	Green 4	Red			Panel having abnormally high temperature	*2	The power is shut down, because the internal temperature has risen. Check the temperature surrounding the PDP. (SD04)
	Green 5	Red			Short-circuiting of the speakers	*2	The power is shut down, because the protection circuit inside the unit is activated. Check if the speaker cables are short-circuited. (SD05)
Red			Green 6		Module microcomputer	Disconnection of the system cable Defective module microcomputer or its peripheral circuits of the panel (Refer to the service manual of the PDP-434PU or PDP-504PU.) Defective main microcomputer (IC7207) Failure in communication (TXD_MD, RXD_MD, REQ_MD) between the panel's module microcomputer and IC7207 (main microcomputer)	None
Red			Green 7		3-wire serial connection of the main section	Defective IC7004 or its peripheral circuits Failure in communication (TXD_IC, XD_IC2, CLK_IC2, IC2_CE, IC2_EMG) between IC7004 and IC7207 (main microcomputer) Defective IC7101 or its peripheral circuits Failure in communication (TXD_IC3, RXD_IC3, CLK_IC3, IC3_CE, IC3_REQ, IC3_BUSY) between IC7101 and IC7207 (main microcomputer)	None
Red			Green 8		IIC of the main section	Defective IC6107 (CD_MAIN) or its peripheral circuits Defective IC6255 (CD_SUB) or its peripheral circuits Defective IC6402 (AD_MAIN) or its peripheral circuits Defective IC6602 (AD_SUB) or its peripheral circuits Defective IC6881 (HDMI_2) or its peripheral circuits Defective IC6951 (BUS_SW) or its peripheral circuits Defective IC7401 (TX) or its peripheral circuits Defective U7501 (TU) or its peripheral circuits Defective IC8002 (AV_SW) or its peripheral circuits Defective IC8005 (RGB_SW) or its peripheral circuits Defective IC7205 (E2P) or its peripheral circuits Failure in communication (SCL_AV, SDA_AV, SCL_MAIN, SDA_MAIN, SCL_HDMI, SDA_HDMI, SCL_EP, SDA_EP) between one of the above devices and IC7207 (main microcomputer)	None
Red			Green 9		Main microcomputer	Defective IC7207 (main microcomputer) Defective flexible cable for communication between the MR MAIN BOARD Assy and the AV BOARD Assy Failure in communication (TXD_IF, RXD_IF, CLK_IF, IF_CE, IF_BUSY) between IC7207 (main microcomputer) and IC8702 (main microcomputer)	None
Red			Green 10		Fan	Failure in the fan motor, or the fan stopped because of dust attached to the fan	None
Red			Green 11		MR or unit having abnormally high temperature	The Media Receiver or the unit being used at high temperature	The power is shut down, because the internal temperature has risen. Check the temperature surrounding the Media Receiver. (SD11)
Red			Green 12		Digital tuner (U.S. model)	Defective digital BS/CS tuner Failure in communication (TXD_DT, RXD_DT) between the digital BS/CS tuner and IC8702 (main microcomputer)	None
Red			Green 13		ASIC power supply (DC-DC)	Defective U8502 (DD_CON) or short-circuiting elsewhere	None
Red		Red 1		PD	MR PWR	Defective Power Supply Assy of the Media Receiver, or power short-circuiting in another Assy	None
Red 2		Red			POWER	*2	None
Red 3		Red			SCAN	*2	None
Red 4		Red			SCN-5V	*2	None
Red 5		Red			Y-DRIVE	*2	None
Red 6		Red			Y-DCDC	*2	None
Red 7		Red			Y-SUS	*2	None
Red 8		Red			ADRS	*2	None
Red 9		Red			X-DRIVE	*2	None
Red 10		Red			X-DCDC	*2	None
Red 11		Red			X-SUS	*2	None
Red 12		Red			D-DCDC	*2	None

*1: Shutdown (SD) is a protective operation controlled by the microcomputer, and you can turn on the unit again using the remote control unit. Power-down (PD) is a protective operation activated by the circuitry and can be reset after AC power is off for about 1 minute.
*2: Refer to the service manual of the PDP-434PU or PDP-504PU.

7.3 PARTS

7.3.1 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

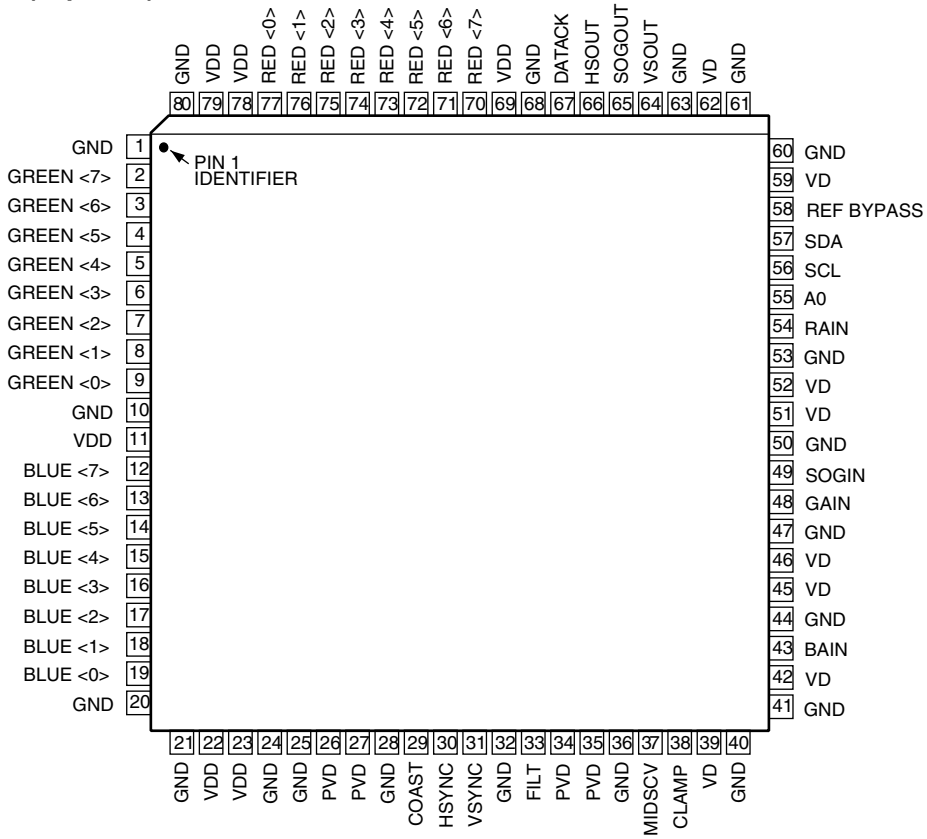
● **List of IC**

AD9883AKST-110, SM5301BS, BA7078AF, Sil9993CTG100, HY57V643220CT-7, MBM29PL3200BE70PFV, Sil170BCLG64, HY57V161610DTC-8, TA1287FG, AXY1066, AXY1070, CXA2069Q

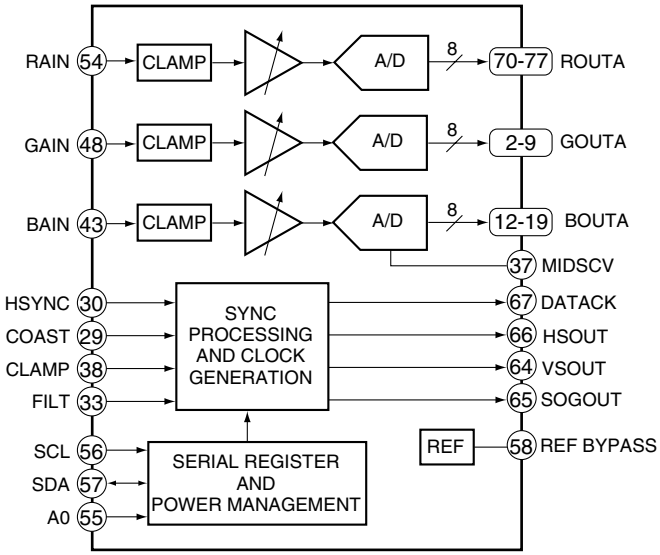
■ AD9883AKST-110 (MR MAIN BOARD ASSY : IC6402)

• 110 MSPS/140 MSPS Analog Interface

● **Pin Arrangement (Top view)**



● **Block Diagram**



● **Pin Function**

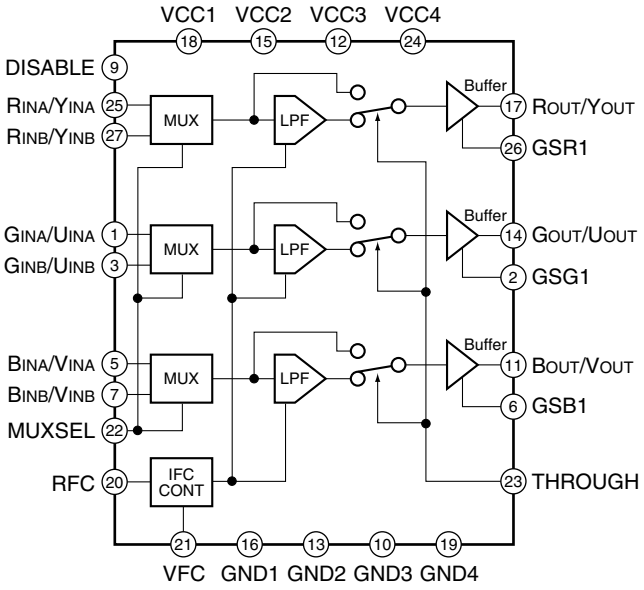
No.	Pin Name	I/O	Pin Function
1	GND	–	Ground
2	GREEN 7	O	Converter Green output (MSB)
3	GREEN 6	O	Converter Green output
4	GREEN 5	O	Converter Green output
5	GREEN 4	O	Converter Green output
6	GREEN 3	O	Converter Green output
7	GREEN 2	O	Converter Green output
8	GREEN 1	O	Converter Green output
9	GREEN 0	O	Converter Green output
10	GND	–	Ground
11	VDD	–	Power supply (3.3V)
12	BLUE 7	O	Converter Blue output (MSB)
13	BLUE 6	O	Converter Blue output
14	BLUE 5	O	Converter Blue output
15	BLUE 4	O	Converter Blue output
16	BLUE 3	O	Converter Blue output
17	BLUE 2	O	Converter Blue output
18	BLUE 1	O	Converter Blue output
19	BLUE 0	O	Converter Blue output
20	GND	–	Ground
21	GND	–	Ground
22	VDD	–	Power supply (3.3V)
23	VDD	–	Power supply (3.3V)
24	GND	–	Ground
25	GND	–	Ground
26	PVD	–	PLL power supply (3.3V)
27	PVD	–	PLL power supply (3.3V)
28	GND	–	Ground
29	COAST	I	PLL COAST signal input
30	HSYNC	I	Horizontal sync. input
31	VSYNC	I	Vertical sync. input
32	GND	–	Ground
33	FILT	–	External filter connection pin for built-in PLL
34	PVD	–	PLL power supply (3.3V)
35	PVD	–	PLL power supply (3.3V)
36	GND	–	Ground
37	MIDSCV	–	Internal middle scale voltage bias
38	CLAMP	I	Clamp input (External clamp signal)
39	VD	–	Analog power supply (3.3V)
40	GND	–	Ground
41	GND	–	Ground
42	VD	–	Analog power supply (3.3V)
43	BAIN	I	Analog input for converter B
44	GND	–	Ground
45	VD	–	Analog power supply (3.3V)

No.	Pin Name	I/O	Pin Function
46	VD	–	Analog power supply (3.3V)
47	GND	–	Ground
48	GAIN	I	Analog input for converter G
49	SOGIN	I	Input for Sync-on Green
50	GND	–	Ground
51	VD	–	Analog power supply (3.3V)
52	VD	–	Analog power supply (3.3V)
53	GND	–	Ground
54	RAIN	I	Analog input for converter R
55	A0	I	Address input 1 of serial port
56	SCL	I	Data clock (max. 100kHz) of serial port
57	SDA	I/O	Data input/output of serial port
58	REF BYPASS	–	Internal reference bypass
59	VD	–	Analog power supply (3.3V)
60	GND	–	Ground
61	GND	–	Ground
62	VD	–	Analog power supply (3.3V)
63	GND	–	Ground
64	VSOUT	O	VSYNC output (phasing with DATACLK)
65	SOGOUT	O	Sync-on-Green slicer output
66	HSOUT	O	HSYNC output (phasing with DATACLK)
67	DATACLK	O	Data input/output clock
68	GND	–	Ground
69	VDD	–	Power supply (3.3V)
70	RED 7	O	Converter Red output (MSB)
71	RED 6	O	Converter Red output
72	RED 5	O	Converter Red output
73	RED 4	O	Converter Red output
74	RED 3	O	Converter Red output
75	RED 2	O	Converter Red output
76	RED 1	O	Converter Red output
77	RED 0	O	Converter Red output
78	VDD	–	Power supply (3.3V)
79	VDD	–	Power supply (3.3V)
80	GND	–	Ground

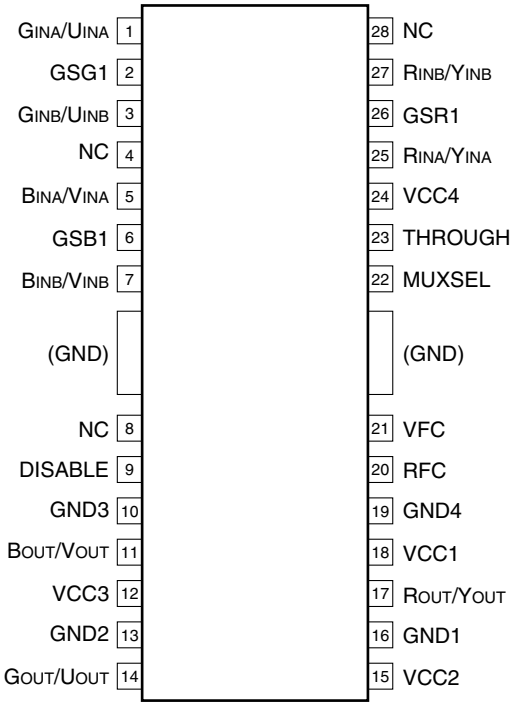
■ SM5301BS (MR MAIN BOARD ASSY : IC6601)

• Video Filter

● Block Diagram



● Pin Arrangement (Top view)



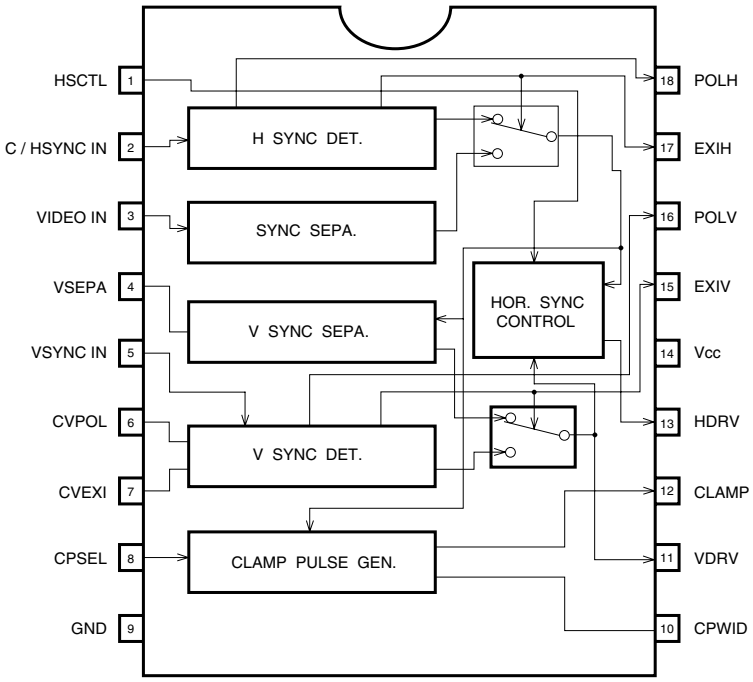
● **Pin Function**

No.	Pin Name	I/O	Pin Function
1	GINA/UINA	I	Analog GINA or UINA signal input. Sync signal is input on SYNCIN pin.
2	GSG1	I	GOUT/UOUT output buffer gain set input
3	GINB/UINB	I	Analog GINB or UINB signal input. Sync signal is input on SYNCIN pin.
4	(NC)	–	No connection
5	BINA/VINA	I	Analog BINA or VINA signal input. Sync signal is input on SYNCIN pin.
6	GSB1	I	BOUT/VOUT output buffer gain set input
7	BINB/VINB	I	Analog BINB or VINB signal input. Sync signal is input on SYNCIN pin.
8	(NC)	–	No connection
9	DISABLE	I	Power save function. Built-in pull-down resistor. L : Enable H : Disable (Output pins: ROUT/YOUT, GOUT/UOUT, and BOUT/VOUT are high impedance.)
10	GND3	–	Analog ground
11	BOUT/VOUT	O	B/V signal output
12	VCC3	–	Analog 5V supply
13	GND2	–	Analog ground
14	GOUT/UOUT	O	G/U signal output
15	VCC2	–	Analog 5V supply
16	GND1	–	Analog ground
17	ROUT/YOUT	O	R/Y signal output
18	VCC1	–	Analog 5V supply
19	GND4	–	Analog ground
20	RFC	–	LPF (lowpass filter) cutoff frequency setting resistor connection
21	VFC	I	LPF (lowpass filter) cutoff frequency setting voltage input
22	MUXSEL	I	Input select signal. Built-in pull-down resistor. L : XINA pin select H : XINB pin select
23	THROUGH	I	Filter through Built-in pull-down resistor. L : Filter function H : Filter through (buffer only)
24	VCC4	–	Analog 5V supply
25	RINA/YINA	I	Analog RINA or YINA signal input. Sync signal is input on SYNCIN pin.
26	GSR1	I	ROUT/YOUT output buffer gain set input
27	RINB/YINB	I	Analog RINB or YINB signal input. Sync signal is input on SYNCIN pin.
28	(NC)	–	No connection

■ BA7078AF (MR MAIN BOARD ASSY : IC6604)

• Multimedia IC

● Block Diagram



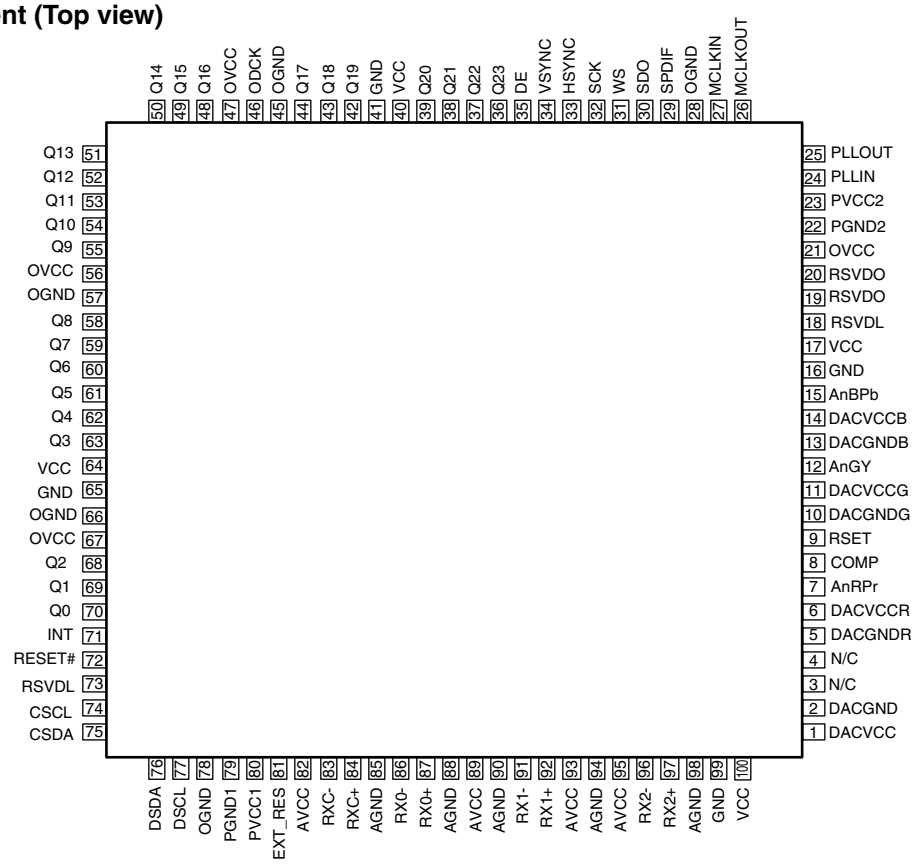
● **Pin Function**

No.	Pin Name	Pin Function
1	HSCTL	HDRV output Used to select whether to output the VDRV section of the HDRV output signal. High : VDRV section of HDRV is output Low : VDRV section of HDRV is not output
2	C/HSYNC IN	Composite sync / H SYNC input Input either the composite synchronization signal or the horizontal synchronization signal. Input is clamped, and is initiated by capacitor coupling.
3	VIDEO IN	SYNC ON VIDEO input Inputs the SYNC ON VIDEO signal(green). Input is sink chip clamped. Input is initiated by capacitor coupling.
4	VSEPA	f-V conversion Converts the horizontal synchronization signal frequency into a voltage. The voltage generated is proportional to the frequency of the horizontal synchronization signal. Attach a 0.56 μF capacitor between the ground pins.
5	VSYNC IN	V SYNC input Inputs the vertical synchronization signal.
6	CVPOL	Vertical polarity integration Integrates the vertical synchronization signal polarity detection circuit. Attach a 1.5 μF capacitor between this pin and the ground.
7	CVEXI	Vertical existence integration Integrates the vertical synchronization signal existence detection circuit. Attach a 1 μF capacitor between this pin and the ground.
8	CPSEL	Setting the clamp position Used to set the clamp pulse generation position to either the front or back edge of HSYNC High : The front edge is the generation position Open : Composite / H SYNC IN : The front edge is the generation position VIDEO IN : The back edge is the generation position Low : The back edge is the generation position
9	GND	Ground
10	CPWID	Setting the clamp pulse width Sets the clamp pulse width according to the attached time constant. Attach a resistor between this pin and VCC and, a capacitor between this pin and GND. When R = 3.9kΩ and C = 100pF, pulse width is approximately 400 ns. Set the resistor to register an abnormality at 1kΩ.
11	VDRV	VDRV output Outputs the vertical synchronization signal. The output signal has positive polarity.
12	CLAMP	Clamp output Outputs the clamp pulse generated from the vertical synchronization signal. The output signal has a positive polarity.
13	HDRV	HDRV output Outputs the clamp pulse generated from the horizontal synchronization signal. The output signal has positive polarity.
14	Vcc	Power supply
15	EXIV	Vertical existence output Indecates whether the vertical synchronization signal exists.
16	POLV	Vertical polarity output Indicates the polarity of the vertical synchronization signal.
17	EXIH	Horizontal existence output Indicates whether the horizontal synchronization signal exists.
18	POLH	Horizontal polarity output Indicates the polarity of the horizontal synchronization signal.

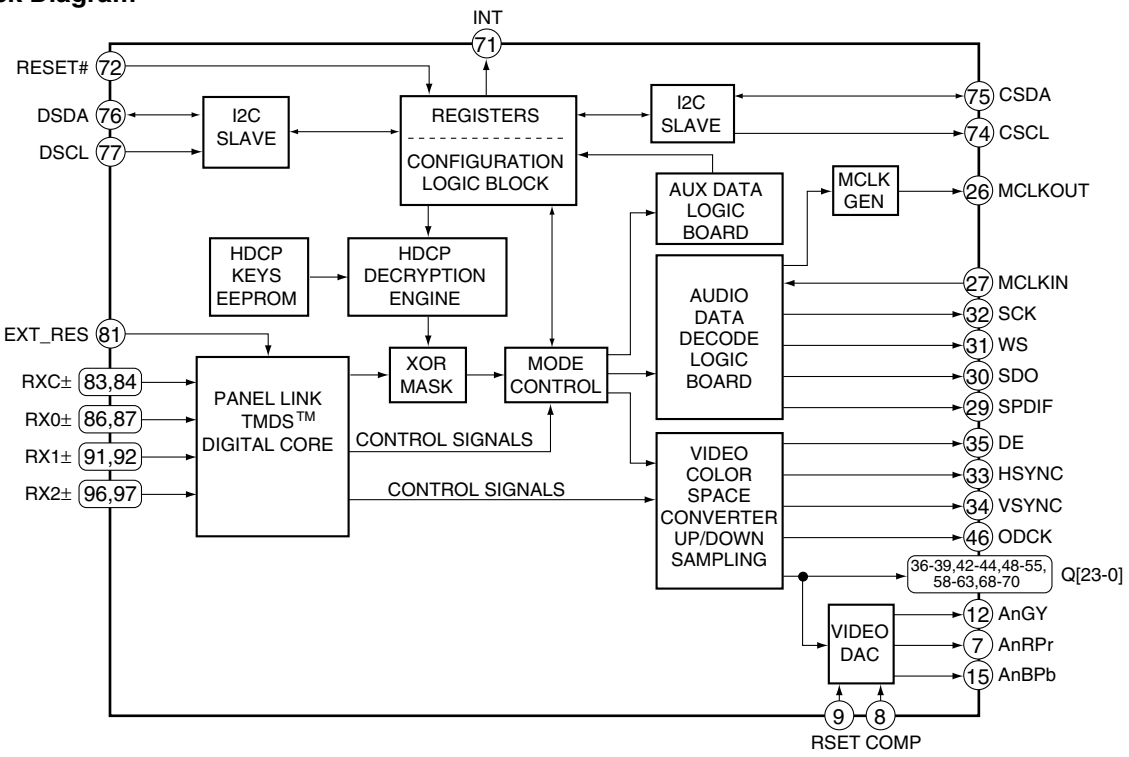
■ SiI9993CTG100 (MR MAIN BOARD ASSY : IC6881)

• HDCP Panel Link Receiver

● Pin Arrangement (Top view)



● Block Diagram



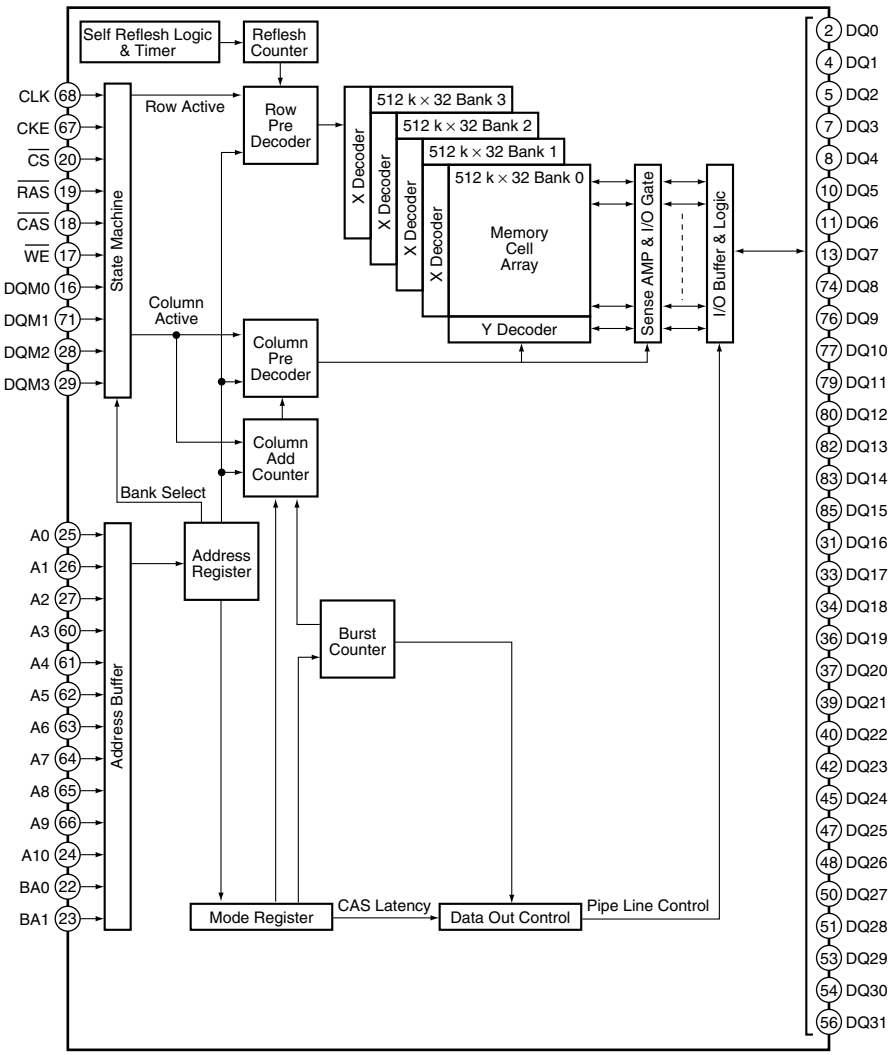
● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	DACVCC	–	DAC power supply (3.3V)	51	Q13	O	24-bit output pixel data bus
2	DACGND	–	DAC ground	52	Q12	O	24-bit output pixel data bus
3	N/C	–	No connection	53	Q11	O	24-bit output pixel data bus
4	N/C	–	No connection	54	Q10	O	24-bit output pixel data bus
5	DACGNDR	–	DAC Red ground	55	Q9	O	24-bit output pixel data bus
6	DACVCCR	–	DAC Red power supply (3.3V)	56	OVCC	–	Output bus power supply (3.3V)
7	AnRPr	O	Red, Pr output of analog video	57	OGND	–	Output bus ground
8	COMP	I	For reference amp. correction of DAC inside	58	Q8	O	24-bit output pixel data bus
9	RSET	I	Full scale adjustment resistor input	59	Q7	O	24-bit output pixel data bus
10	DACGNDG	–	DAC Green ground	60	Q6	O	24-bit output pixel data bus
11	DACVCCG	–	DAC Green power supply (3.3V)	61	Q5	O	24-bit output pixel data bus
12	AnGY	O	Green, Y output of analog video	62	Q4	O	24-bit output pixel data bus
13	DACGNDB	–	DAC Blue ground	63	Q3	O	24-bit output pixel data bus
14	DACVCCB	–	DAC Blue power supply (3.3V)	64	VCC	–	Digital power supply (3.3V)
15	AnBPb	O	Blue, Pb output of analog video	65	GND	–	Digital ground
16	GND	–	Digital ground	66	OGND	–	Output bus ground
17	VCC	–	Digital power supply (3.3V)	67	OVCC	–	Output bus power supply (3.3V)
18	RSVDL	I	Reserved Fixed to low.	68	Q2	O	24-bit output pixel data bus
19	RSVDD	O	Reserved No connection	69	Q1	O	24-bit output pixel data bus
20	RSVDD	O	Reserved No connection	70	Q0	O	24-bit output pixel data bus
21	OVCC	–	Output bus power supply (3.3V)	71	INT	O	Interruption output
22	PGND2	–	Audio PLL ground	72	RESET#	I	Reset Activ low.
23	PVCC2	–	Audio PLL power supply (3.3V)	73	RSVDL	I	Reserved Fixed to low.
24	PLLIN	I/O	PLL filter input	74	CSCL	I	Configuration I2C clock
25	PLLOUT	I/O	PLL filter output	75	CSDA	I/O	Configuration I2C data
26	MCCLKOUT	O	Audio master clock output	76	DSDA	I/O	DDC I2C data
27	MCCLKIN	I	Reference audio master clock input	77	DSCL	I	DDC I2C clock
28	OGND	–	Output bus ground	78	OGND	–	Output bus ground
29	SPDIF	O	SPDIF audio output	79	PGND1	–	PLL ground
30	SDO	O	I2S serial data output	80	PVCC1	–	PLL power supply (3.3V)
31	WS	O	I2S word selecting output	81	EXT_RES	I	Input impedance adjustment
32	SCK	O	I2S serial clock output	82	AVCC	–	Analog power supply (3.3V)
33	HSYNC	O	Horizontal sync. control signal output	83	RXC-	I	TMDS data input
34	VSYNC	O	Vertical sync. control signal output	84	RXC+	I	TMDS data input
35	DE	O	Data enable	85	AGND	–	Analog ground
36	Q23	O	24-bit output pixel data bus	86	RX0-	I	TMDS data input
37	Q22	O	24-bit output pixel data bus	87	RX0+	I	TMDS data input
38	Q21	O	24-bit output pixel data bus	88	AGND	–	Analog ground
39	Q20	O	24-bit output pixel data bus	89	AVCC	–	Analog power supply (3.3V)
40	VCC	–	Digital power supply (3.3V)	90	AGND	–	Analog ground
41	GND	–	Digital ground	91	RX1-	I	TMDS data input
42	Q19	O	24-bit output pixel data bus	92	RX1+	I	TMDS data input
43	Q18	O	24-bit output pixel data bus	93	AVCC	–	Analog power supply (3.3V)
44	Q17	O	24-bit output pixel data bus	94	AGND	–	Analog ground
45	OGND	–	Output bus ground	95	AVCC	–	Analog power supply (3.3V)
46	ODCK	O	Data clock output	96	RX2-	I	TMDS data input
47	OVCC	–	Output bus power supply (3.3V)	97	RX2+	I	TMDS data input
48	Q16	O	24-bit output pixel data bus	98	AGND	–	Analog ground
49	Q15	O	24-bit output pixel data bus	99	GND	–	Digital ground
50	Q14	O	24-bit output pixel data bus	100	VCC	–	Digital power supply (3.3V)

HY57V643220CT-7 (MR MAIN BOARD ASSY : IC7001, IC7002)

• Synchronous DRAM

● Block Diagram



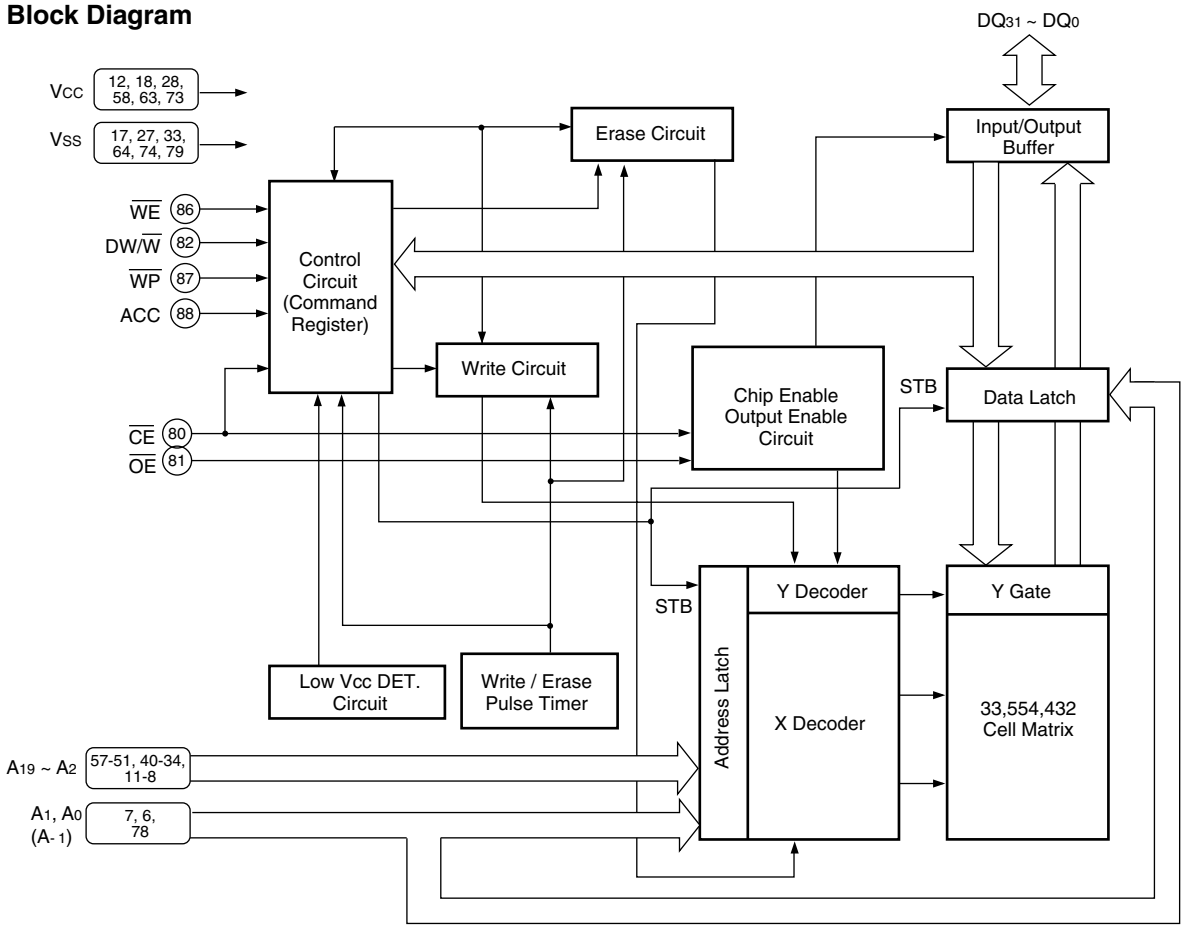
● **Pin Function**

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	VDD	–	Power supply	44	VSS	–	Ground
2	DQ0	I/O	Data input/output	45	DQ24	I/O	Data input/output
3	VDDQ	–	Power supply for output buffer	46	VSSQ	–	Ground for output buffer
4	DQ1	I/O	Data input/output	47	DQ25	I/O	Data input/output
5	DQ2	I/O	Data input/output	48	DQ26	I/O	Data input/output
6	VSSQ	–	Ground for output buffer	49	VDDQ	–	Power supply for output buffer
7	DQ3	I/O	Data input/output	50	DQ27	I/O	Data input/output
8	DQ4	I/O	Data input/output	51	DQ28	I/O	Data input/output
9	VDDQ	–	Power supply for output buffer	52	VSSQ	–	Ground for output buffer
10	DQ5	I/O	Data input/output	53	DQ29	I/O	Data input/output
11	DQ6	I/O	Data input/output	54	DQ30	I/O	Data input/output
12	VSSQ	–	Ground for output buffer	55	VDDQ	–	Power supply for output buffer
13	DQ7	I/O	Data input/output	56	DQ31	I/O	Data input/output
14	NC	–	No connection	57	NC	–	No connection
15	VDD	–	Power supply	58	VSS	–	Ground
16	DQM0	I	Data input/output mask	59	DQM3	I	Data input/output mask
17	/WE	I	Write enable	60	A3	I	Address input
18	/CAS	I	Column address strobe	61	A4	I	Address input
19	/RAS	I	Row address strobe	62	A5	I	Address input
20	/CS	I	Chip select input	63	A6	I	Address input
21	NC	–	No connection	64	A7	I	Address input
22	BA0	I	Bank address input	65	A8	I	Address input
23	BA1	I	Bank address input	66	A9	I	Address input
24	A10/AP	I	Address input	67	CKE	I	Clock enable
25	A0	I	Address input	68	CLK	I	System clock input
26	A1	I	Address input	69	NC	–	No connection
27	A2	I	Address input	70	NC	–	No connection
28	DQM2	I	Data input/output mask	71	DQM1	I	Data input/output mask
29	VDD	–	Power supply	72	VSS	–	Ground
30	NC	–	No connection	73	NC	–	No connection
31	DQ16	I/O	Data input/output	74	DQ8	I/O	Data input/output
32	VSSQ	–	Ground for output buffer	75	VDDQ	–	Power supply for output buffer
33	DQ17	I/O	Data input/output	76	DQ9	I/O	Data input/output
34	DQ18	I/O	Data input/output	77	DQ10	I/O	Data input/output
35	VDDQ	–	Power supply for output buffer	78	VSSQ	–	Ground for output buffer
36	DQ19	I/O	Data input/output	79	DQ11	I/O	Data input/output
37	DQ20	I/O	Data input/output	80	DQ12	I/O	Data input/output
38	VSSQ	–	Ground for output buffer	81	VDDQ	–	Power supply for output buffer
39	DQ21	I/O	Data input/output	82	DQ13	I/O	Data input/output
40	DQ22	I/O	Data input/output	83	DQ14	I/O	Data input/output
41	VDDQ	–	Power supply for output buffer	84	VSSQ	–	Ground for output buffer
42	DQ23	I/O	Data input/output	85	DQ15	I/O	Data input/output
43	VDD	–	Power supply	86	VSS	–	Ground

■ MBM29PL3200BE70PFV (MR MAIN BOARD ASSY : IC7152)

• Page Mode Flash Memory

● Block Diagram



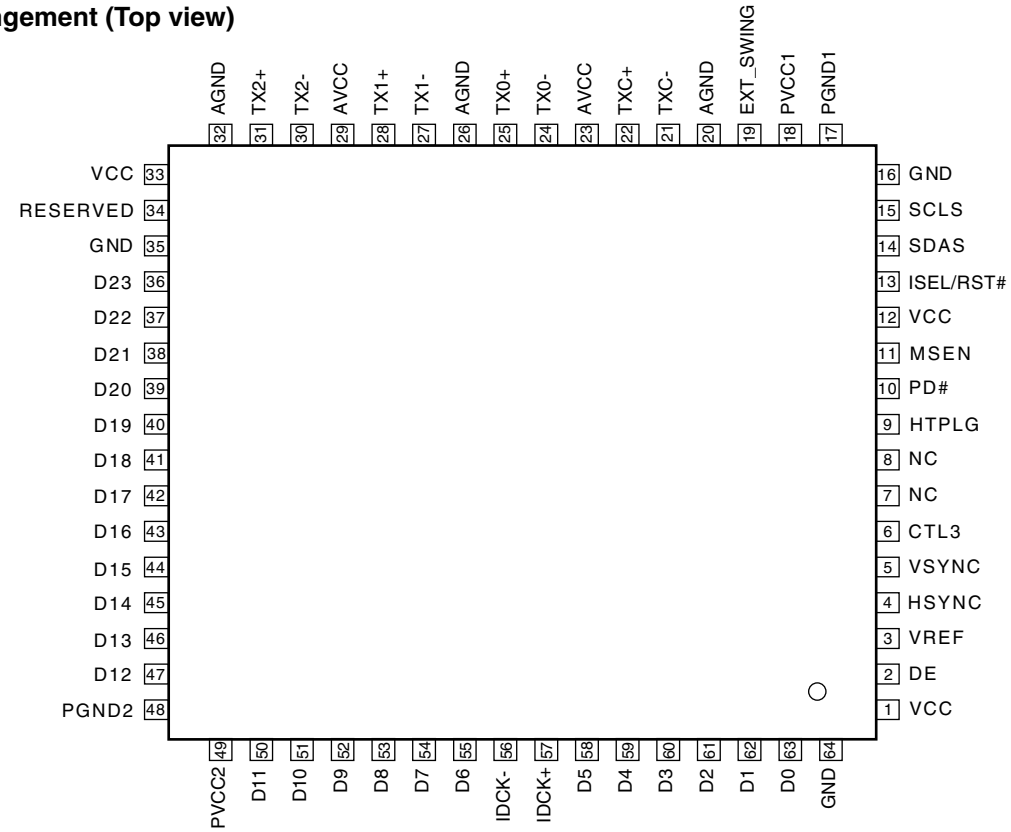
● Pin Function

No.	Pin Name	I/O	Pin Function
57-51, 40-34, 11-6, 78	A_{19} - A_0, A_{-1}	I	Address input
78-75, 72-65, 62-59, 32-19, 26-19, 16-13	DQ_{31} - DQ_0	I/O	Data input/output
80	CE	I	Chip enable
81	OE	I	Output enable
86	WE	I	Write enable
82	DW/W	I	16 bit, 32 bit mode switch
87	WP	I	Write protect
88	ACC	I	Acceleration
17, 27, 33, 64, 74, 79	V_{SS}	–	Ground
12, 18, 28, 58, 63, 73	V_{CC}	–	Power supply
1-5, 41-50, 83-85, 89, 90	N.C.	–	No connection

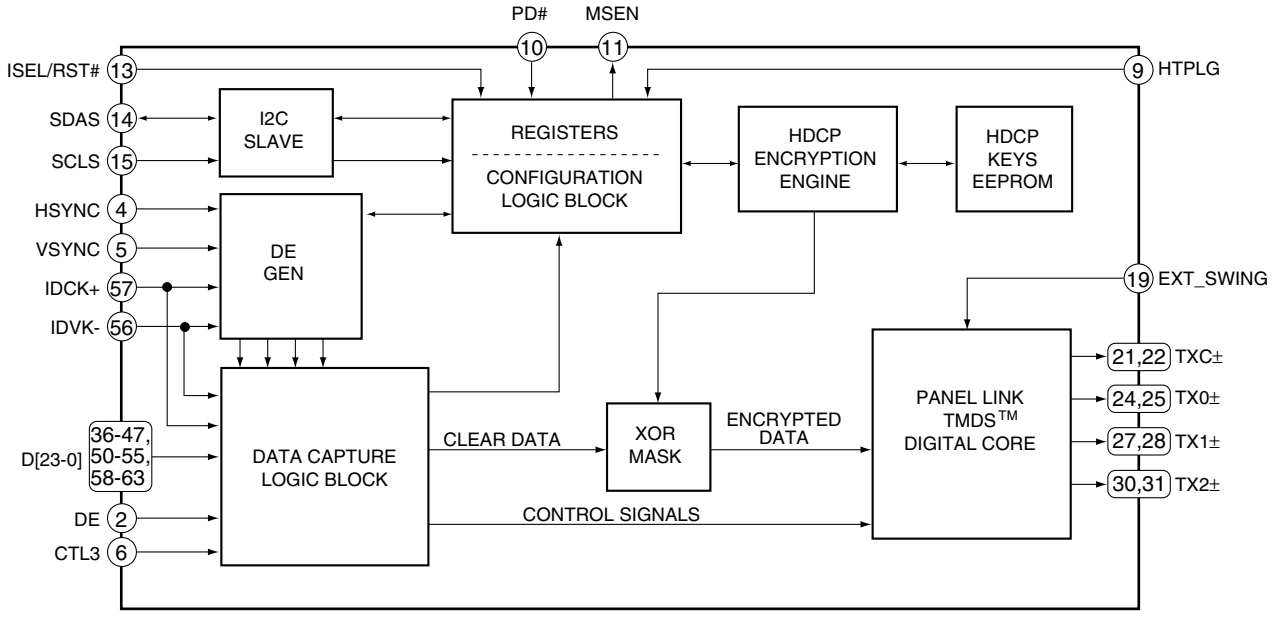
■ Sil170BCLG64 (MR MAIN BOARD ASSY : IC7401)

• HDCP Panel Link Transmitter

● Pin Arrangement (Top view)



● Block Diagram



● Pin Function

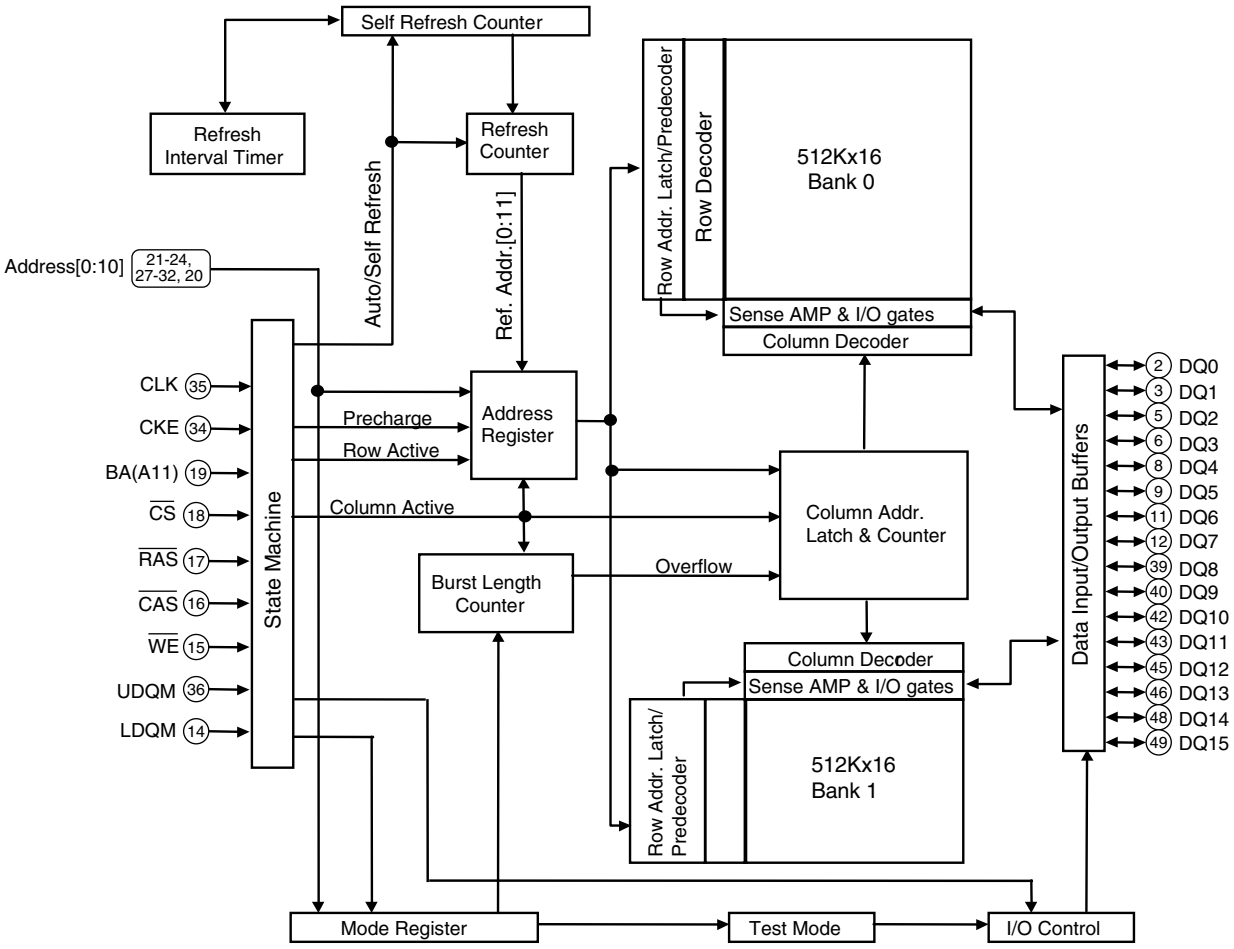
No.	Pin Name	I/O	Pin Function
1	VCC	–	Digital power supply (3.3V)
2	DE	I	Data enable
3	VREF	I	3.3V fixed
4	HSYNC	I	Horizontal sync. control signal input
5	VSYNC	I	Vertical sync. control signal input
6	CTL3	I	External CTL3 input
7	NC	–	No connection
8	NC	–	No connection
9	HTPLG	I	Monitor chrage input
10	PD#	I	Power down input (Active low)
11	MSEN	O	Monitor sense output (open-collector output)
12	VCC	–	Digital power supply (3.3V)
13	ISEL/RST#	I	I2C interface selecting input High: I2C interface is active
14	SDAS	I/O	DDC I2C data input/output
15	SCLS	I	DDC I2C clock input
16	GND	–	Digital ground
17	PGND1	–	PLL analog ground
18	PVCC1	–	Analog power supply for PLL of primary side (3.3V)
19	EXT_SWING	I	Voltage regulation adjustment
20	AGND	–	Analog ground
21	TXC-	O	Differential signal clock output of TMDS Low voltage
22	TXC+	O	Differential signal clock output of TMDS Low voltage
23	AVCC	–	Analog power supply (3.3V)
24	TX0-	O	Differential signal clock output of TMDS Low voltage
25	TX0+	O	Differential signal clock output of TMDS Low voltage
26	AGND	–	Analog ground
27	TX1-	O	Differential signal clock output of TMDS Low voltage
28	TX1+	O	Differential signal clock output of TMDS Low voltage
29	AVCC	–	Analog power supply (3.3V)
30	TX2-	O	Differential signal clock output of TMDS Low voltage
31	TX2+	O	Differential signal clock output of TMDS Low voltage
32	AGND	–	Analog ground
33	VCC	–	Digital power supply (3.3V)
34	RESERVED	I	Reserved pin for Silicon Image Normally, fixed to low.
35	GND	–	Digital ground
36	D23	I	24-bit pixel bus input
37	D22	I	24-bit pixel bus input
38	D21	I	24-bit pixel bus input
39	D20	I	24-bit pixel bus input
40	D19	I	24-bit pixel bus input
41	D18	I	24-bit pixel bus input
42	D17	I	24-bit pixel bus input
43	D16	I	24-bit pixel bus input
44	D15	I	24-bit pixel bus input
45	D14	I	24-bit pixel bus input

No.	Pin Name	I/O	Pin Function
46	D13	I	24-bit pixel bus input
47	D12	I	24-bit pixel bus input
48	PGND2	–	PLL analog ground
49	PVCC2	–	Analog power supply for filter PLL (3.3V)
50	D11	I	24-bit / 12-bit pixel bus input
51	D10	I	24-bit / 12-bit pixel bus input
52	D9	I	24-bit / 12-bit pixel bus input
53	D8	I	24-bit / 12-bit pixel bus input
54	D7	I	24-bit / 12-bit pixel bus input
55	D6	I	24-bit / 12-bit pixel bus input
56	IDCK-	I	Data clock - input
57	IDCK+	I	Data clock + input
58	D5	I	24-bit / 12-bit pixel bus input
59	D4	I	24-bit / 12-bit pixel bus input
60	D3	I	24-bit / 12-bit pixel bus input
61	D2	I	24-bit / 12-bit pixel bus input
62	D1	I	24-bit / 12-bit pixel bus input
63	D0	I	24-bit / 12-bit pixel bus input
64	GND	–	Digital ground

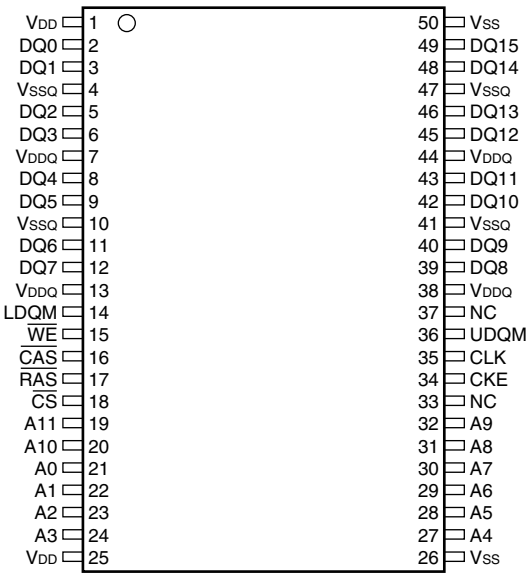
■ HY57V161610DTC-8 (MR MAIN BOARD ASSY : IC6106)

• 16M SDRAM

● Block Diagram



● Pin Arrangement (Top view)



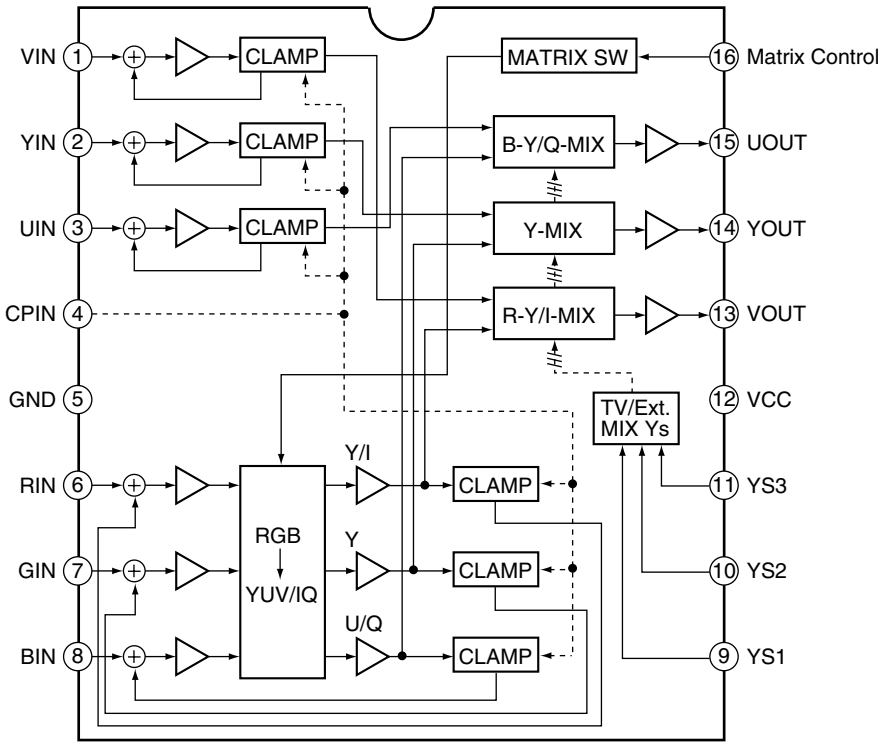
● Pin Function

No.	Pin Name	I/O	Pin Function
1	VDD	–	Power supply
2	DQ0	I/O	Data input/output
3	DQ1	I/O	Data input/output
4	VSSQ	–	Ground for DQ
5	DQ2	I/O	Data input/output
6	DQ3	I/O	Data input/output
7	VDDQ	–	Power supply for DQ
8	DQ4	I/O	Data input/output
9	DQ5	I/O	Data input/output
10	VSSQ	–	Ground for DQ
11	DQ6	I/O	Data input/output
12	DQ7	I/O	Data input/output
13	VDDQ	–	Power supply for DQ
14	LDQM	I	Data input/output mask
15	/WE	I	Write enable
16	/CAS	I	Column address strobe
17	/RAS	I	Row address strobe
18	/CS	I	Chip select input
19	A11	I	Address input
20	A10	I	Address input
21	A0	I	Address input
22	A1	I	Address input
23	A2	I	Address input
24	A3	I	Address input
25	VDD	–	Power supply
26	VSS	–	Ground
27	A4	I	Address input
28	A5	I	Address input
29	A6	I	Address input
30	A7	I	Address input
31	A8	I	Address input
32	A9	I	Address input
33	NC	–	No connection
34	CKE	I	Clock enable
35	CLK	I	System clock input
36	UDQM	I	Data input/output mask
37	NC	–	No connection
38	VDDQ	–	Power supply for DQ
39	DQ8	I/O	Data input/output
40	DQ9	I/O	Data input/output
41	VSSQ	–	Ground for DQ
42	DQ10	I/O	Data input/output
43	DQ11	I/O	Data input/output
44	VDDQ	–	Power supply for DQ
45	DQ12	I/O	Data input/output
46	DQ13	I/O	Data input/output
47	VSSQ	–	Ground for DQ
48	DQ14	I/O	Data input/output
49	DQ15	I/O	Data input/output
50	VSS	–	Ground

■ TA1287FG (AV BOARD ASSY : IC8905)

• RGB to YUV/IQ High-speed Matrix IC

● Block Diagram



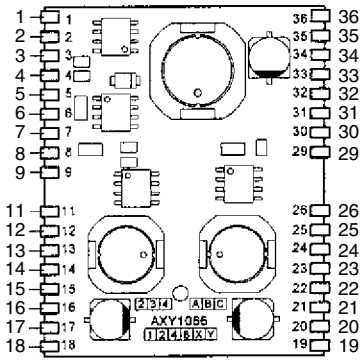
● Pin Function

No.	Pin Name	I/O	Pin Function
1	VIN	I	Input R-Y (V) or R signal through a clamping capacitor.
2	YIN	I	Input Y or G signal through a clamping capacitor.
3	UIN	I	Input B-Y (U) or B signal through a clamping capacitor.
4	CPIN	I	Input clamping pulse. Threshold: 0.75V
5	GND	–	Ground
6	RIN	I	Input R or R-Y (V) signal through a clamping capacitor.
7	GIN	I	Input G or Y signal through a clamping capacitor.
8	BIN	I	Input B or B-Y (U) signal through a clamping capacitor.
9	YS1	I	Select to switch mixing ratio. Threshold: 0.75V
10	YS2	I	Select to switch mixing ratio. Threshold: 0.75V
11	YS3	I	Select to switch mixing ratio. Threshold: 0.75V
12	VCC	–	Power supply 9V
13	VOUT	O	Output R-Y (V) or R signal.
14	YOUT	O	Output Y or G signal.
15	UOUT	O	Output B-Y (U) or B signal.
16	Matrix Control	I	This pin's voltage control the matrix coefficient for output signals. Selects the output mode.

■ AXY1066 (AV BOARD ASSY : U8502)

• DC-DC Converter Unit

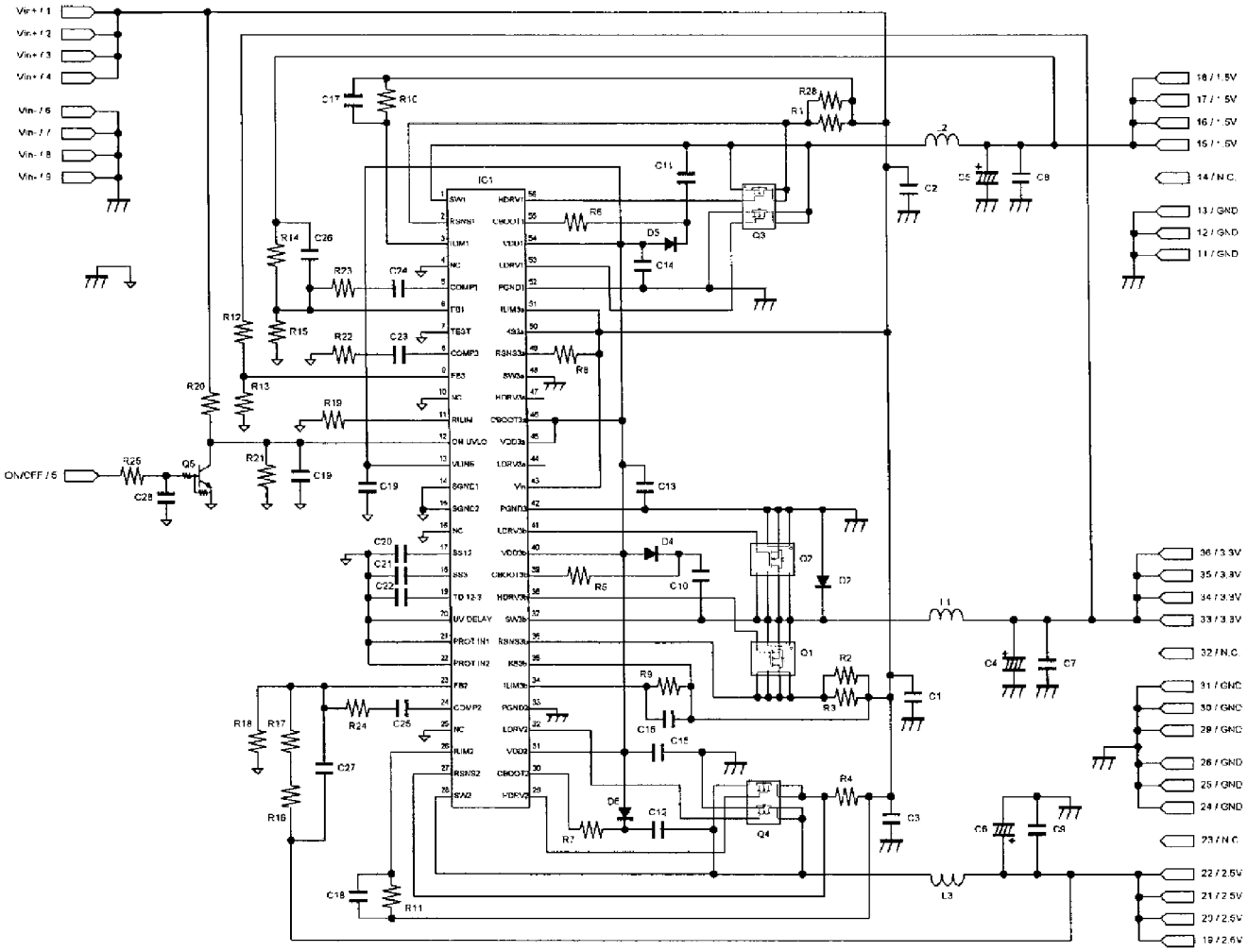
● Pin Arrangement (Top view)



● Pin Function

No.	Pin Name	Pin Function	No.	Pin Name	Pin Function
1	Vin	12V input	19	Vo2	2.5V output
2	Vin	12V input	20	Vo2	2.5V output
3	Vin	12V input	21	Vo2	2.5V output
4	Vin	12V input	22	Vo2	2.5V output
5	ON/OFF	Output ON/OFF	23	N.C.	No connection
6	GND	Ground	24	GND	Ground
7	GND	Ground	25	GND	Ground
8	GND	Ground	26	GND	Ground
9	GND	Ground			
11	GND	Ground	29	GND	Ground
12	GND	Ground	30	GND	Ground
13	GND	Ground	31	GND	Ground
14	N.C.	No connection	32	N.C.	No connection
15	Vo3	1.5V output	33	Vo1	3.3V output
16	Vo3	1.5V output	34	Vo1	3.3V output
17	Vo3	1.5V output	35	Vo1	3.3V output
18	Vo3	1.5V output	36	Vo1	3.3V output

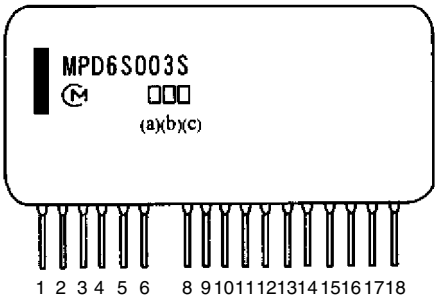
● Schematic Diagram



■ AXY1070 (AV BOARD ASSY : U8507, U8508)

• DC-DC Converter Unit

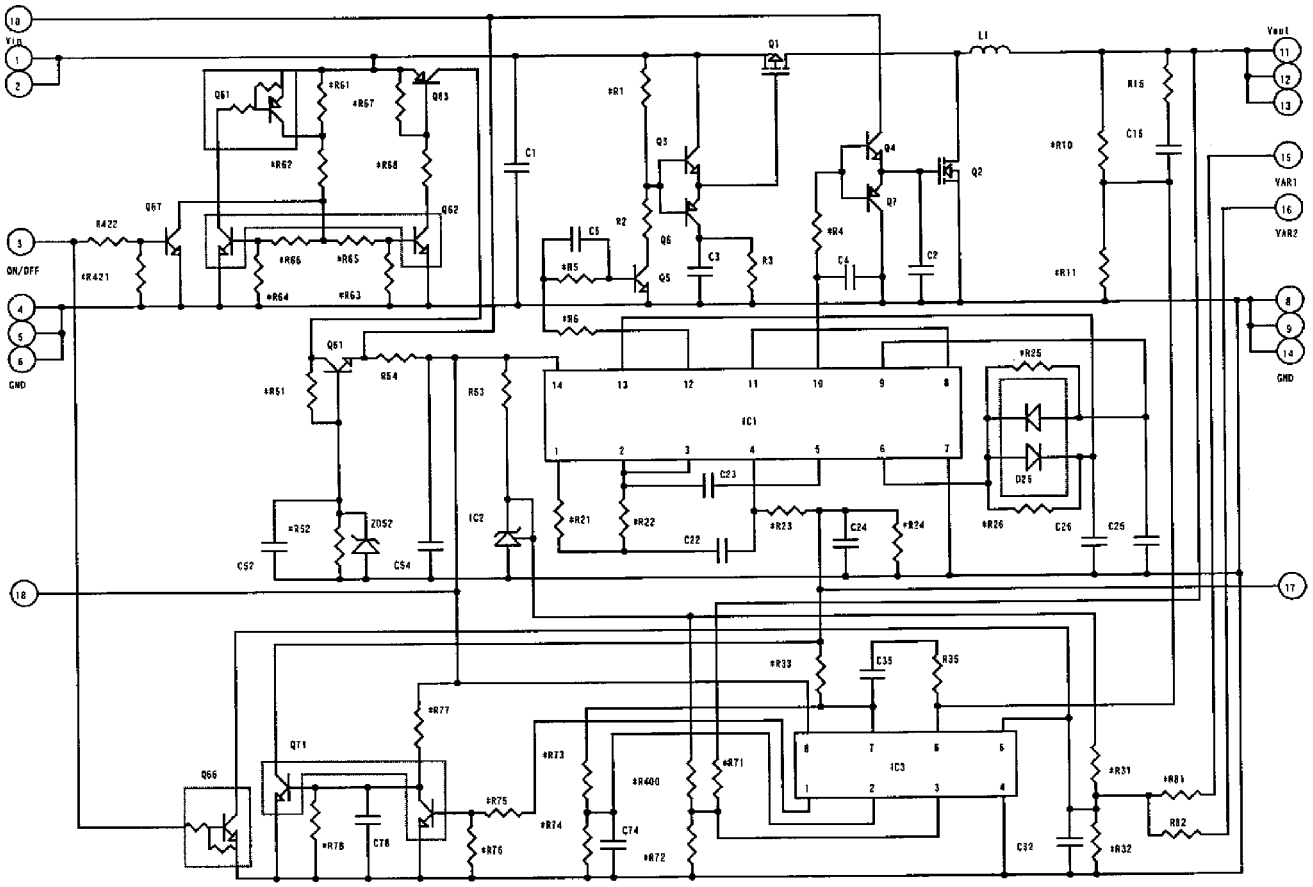
● Pin Arrangement



● Pin Function

No.	Pin Name	Pin Function
1	Vin	Voltage input
2	Vin	Voltage input
3	ON/OFF	Output ON/OFF
4	GND	Ground
5	GND	Ground
6	GND	Ground
8	GND	Ground
9	GND	Ground
10	N.C.	No connection
11	Vout	Voltage output
12	Vout	Voltage output
13	Vout	Voltage output
14	GND	Ground
15	VAR1	
16	VAR2	
17	N.C.	No connection
18	N.C.	No connection

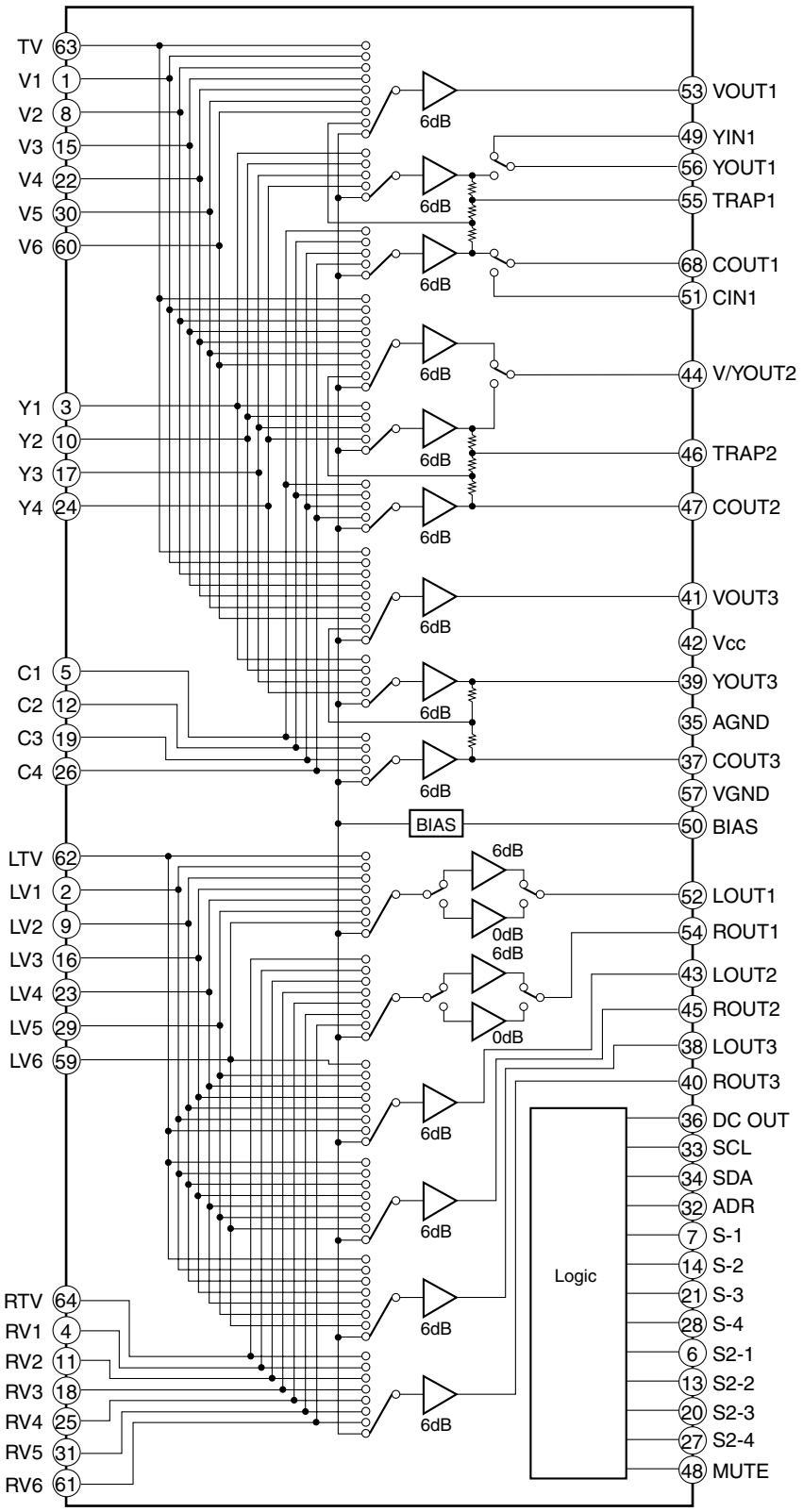
● Schematic Diagram



■ CXA2069Q (AV BOARD ASSY : IC8002)

• 7-Input 3-Output Audio/Video Switch

● Block Diagram



● Pin Function

No.	Pin Name	I/O	Pin Function
63 1 8 15 22 30 60	TV V1 V2 V3 V4 V5 V6	I	Video signal inputs. Input composite video signals.
3 10 17 24 49	Y1 Y2 Y3 Y4 YIN1	I	Y/C separation signal inputs. Input luminance signals. The YIN1 pin inputs the signal obtained by Y/C separating the VOUT1 pin output.
5 12 19 26 51	C1 C2 C3 C4 CIN1	I	Y/C separation signal inputs. Input chrominance signals. The CIN1 pin inputs the signal obtained by Y/C separating the VOUT1 pin output.
62, 2 9, 16 23, 29 59, 64 4, 11 18, 25 31, 61	LTV, LV1 LV2, LV3 LV4, LV5 LV6, RTV RV1, RV2 RV3, RV4 RV5, RV6	I	Audio signal inputs.
53 41	VOUT1 VOUT3	O	Video signal outputs. Output composite video signals.
44	V/YOUT2	O	Video signal output. Either composite video signal output or luminance signal output can be selected by I2C bus control.
56 39	YOUT1 YOUT3	O	Video signal outputs. Output luminance signals.
58 47 37	COUT1 COUT2 COUT3	O	Video signal outputs. Output chrominance signals.
52 43 38 54 45 40	LOUT1 LOUT2 LOUT3 ROUT1 ROUT2 ROUT3	O	Audio signal outputs. Zo=50 ohm (within DC ± 2mA)
6 13 20 27	S2-1 S2-2 S2-3 S2-4	–	Detects the S2-compatible DC superimposed onto the C signal. 4 : 3 video signal at 1.3 V or less 4 : 3 letter-box signal at 1.3 V or more to 2.5 V or less 16 : 9 picture squeezed signal at 2.5 V or more This pin is pulled down to GND by a 100 k ohm resistor, so the 4 : 3 video signal is selected when open.

No.	Pin Name	I/O	Pin Function
7 14 21 28	S-1 S-2 S-3 S-4	–	Composite video/S selector. The detection results are written to the status register. S signal at 3.5 V or less. Composite video signal at 3.5 V or more. This pin is pulled up to 5 V by a 100 k ohm resistor, so the composite video signal is selected when open.
32	ADR	–	Selects the slave address for the I2C bus. 90H at 1.5 V or less 92H at 2.5 V or more 90H when open.
33	SCL	I	I2C bus signal input VILmax=1.5 V VIHmin=3.0 V
34	SDA	I	I2C bus signal input VILmax=1.5 V VIHmin=3.0 V VOLmax=0.4 V
36	DC_OUT	O	Outputs the S2-compatible DC superimposed onto the COUT3 output. The DC is superimposed by connecting this pin to the COUT3 output via a capacitor. Control is performed by the I2C bus. When 0 V is output, Q1 is ON and the impedance is 5 k ohm. S2 protocol output impedance of 10 ± 3 k ohm is realized by attaching external resistance of 4.7 k ohm. DC_OUT (bus) Output DC 0 4.5 V 1 0 V 2 1.9 V 3 4.5 V
55 46	TRAP1 TRAP2	–	Connects trap circuit for subcarrier.
48	MUTE	–	Audio signal output mute. Mute OFF at 1.5 V or less Mute ON at 2.5 V or more Mute OFF when open.
50	BIAS	–	Internal reference bias (VCC/2). Connect to GND via a capacitor.

7.4 CLEANING

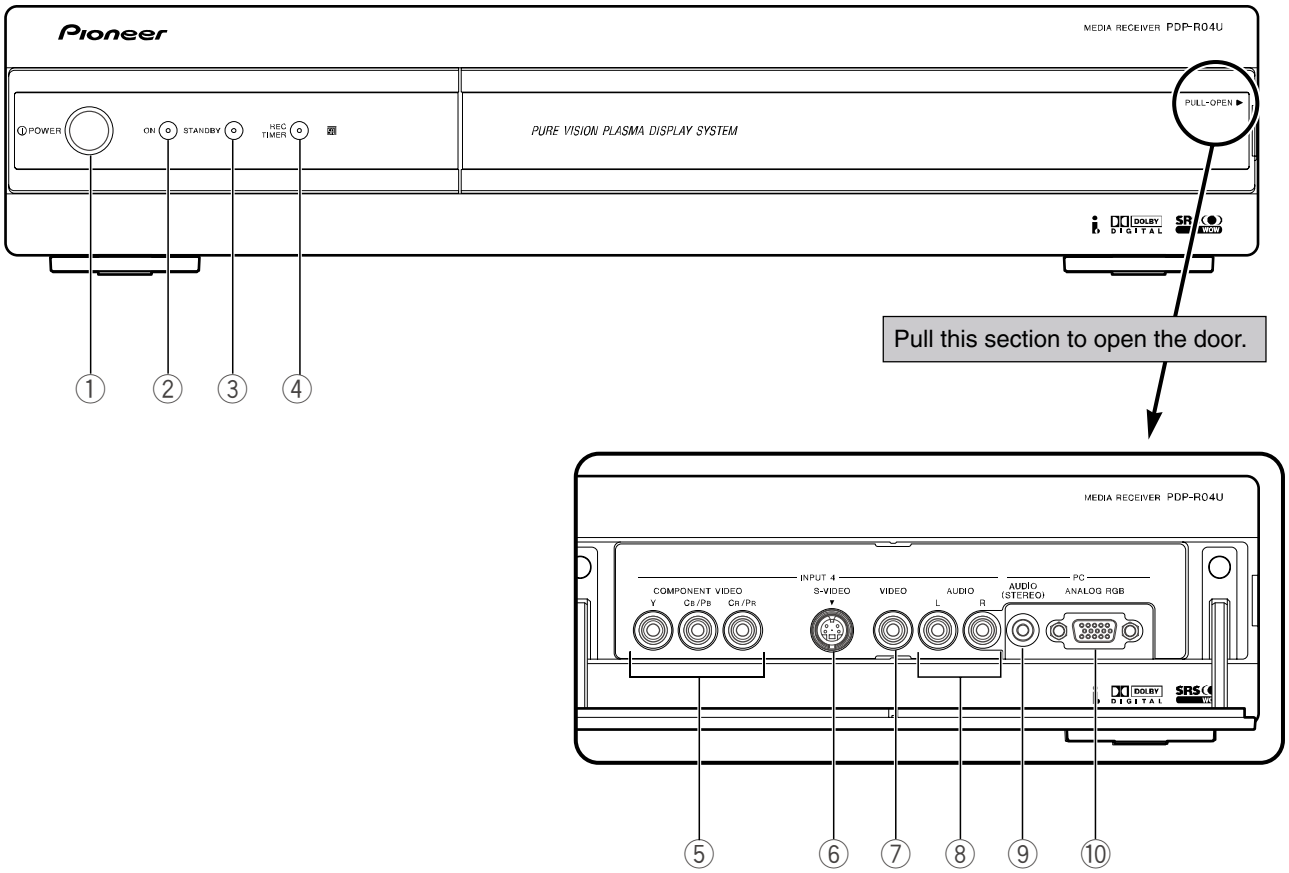
Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	Cleaning tools
Fans	Cleaning paper : GED-008

8. PANEL FACILITIES

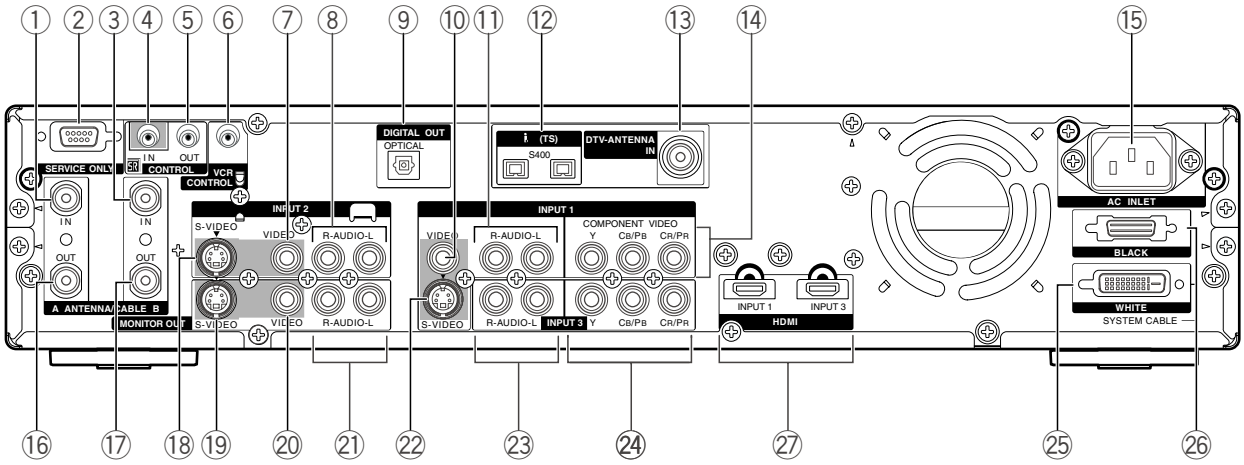
Media Receiver

Front view (PDP-R04U)



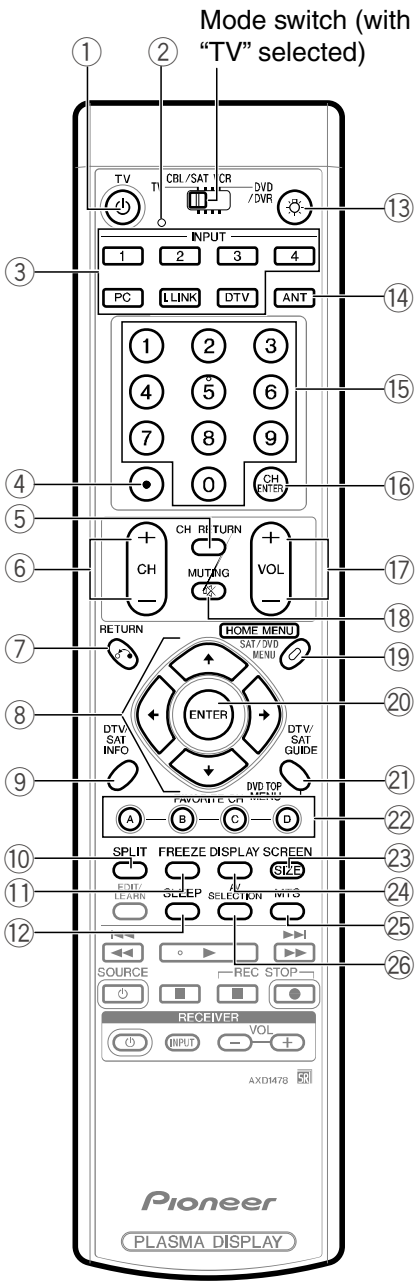
① **POWER** button
② POWER ON indicator
③ STANDBY indicator
④ REC TIMER indicator
⑤ INPUT 4 COMPONENT VIDEO terminals (Y, CB/PB, CR/PR)
⑥ INPUT 4 terminal (S-VIDEO)
⑦ INPUT 4 terminal (VIDEO)
⑧ INPUT 4 terminals (AUDIO)
⑨ PC INPUT terminal (AUDIO)
⑩ PC INPUT terminal (ANALOG RGB)

Rear view



① Antenna A input terminal
② RS-232C terminal (used in the factory setup)
③ Antenna B input terminal
④ Control input terminal
⑤ Control output terminal
⑥ VCR control terminal
⑦ INPUT 2 terminal (VIDEO)
⑧ INPUT 2 terminals (AUDIO)
⑨ DIGITAL AUDIO output terminal (OPTICAL)
⑩ INPUT 1 terminal (VIDEO)
⑪ INPUT 1 terminals (AUDIO)
⑫ i.LINK terminals
⑬ DTV Antenna input terminal
⑭ INPUT 1 COMPONENT VIDEO terminals (Y, CB/PB, CR/PR)
⑮ AC INLET terminal
⑯ Antenna A output terminal
⑰ Antenna B output terminal
⑱ INPUT 2 terminal (S-VIDEO)
⑲ MONITOR OUT terminal (S-VIDEO)
⑳ MONITOR OUT terminal (VIDEO)
㉑ MONITOR OUT terminals (AUDIO)
㉒ INPUT 1 terminal (S-VIDEO)
㉓ INPUT 3 terminals (AUDIO)
㉔ INPUT 3 COMPONENT VIDEO terminals (Y, CB/PB, CR/PR)
㉕ SYSTEM CABLE terminal (WHITE)
㉖ SYSTEM CABLE terminal (BLACK)
㉗ INPUT 1, 3 HDMI terminal

Remote control unit



With the mode switch set to TV

① TV ⏻ : Turns on the power to the Plasma Display or places it into standby mode.

② Transmission confirmation LED

③ INPUT: Selects an input source of the Plasma Display. (DTV, i.LINK, INPUT 1, INPUT 2, INPUT 3, INPUT 4, PC)

④ •(dot): Enters a dot.

⑤ CH RETURN: Returns to the previous channel.

⑥ CH +/–: Selects the channel.

⑦ RETURN: Returns to the previous menu screen.

⑧ ↑/↓/←/→: Selects a desired item on the menu screen.

⑨ DTV INFO: Shows more information on DTV programs.

⑩ SPLIT: Switches the screen mode among 2-screen, picture-in-picture, and single-screen.

⑪ FREEZE: Freezes a frame from a moving image. Press again to cancel the function.

⑫ SLEEP: Sets the sleep timer.

⑬ ☼:When pressed, all buttons on the remote control unit will light. The lighting will turn off if no operations are performed within about 5 seconds. This button is used for performing operations in dark places.

⑭ ANT: Selects the antenna (A, B). See pages 24 to 26 for details.

⑮ 0 – 9: Sets the channel.

⑯ CH ENTER: Executes a channel number.

⑰ VOL +/–: Sets the volume.

⑱ MUTING: Mutes the sound.

⑲ HOME MENU: Displays the menu screen.

⑳ ENTER: Executes a command.

㉑ DTV GUIDE: Displays the DTV Electronic Program Guide (EPG).

㉒ FAVORITE CH (A, B, C, D):
Selects any of the four preset channels. See details to set the FAVORITE CH.
While watching, you can toggle the set channels by pressing A, B, C and D.

㉓ SCREEN SIZE: Selects the screen size.

㉔ DISPLAY: Displays the channel information.

㉕ MTS: Selects the MTS/SAP.

㉖ AV SELECTION: Selects audio and video settings. (AV mode: STANDARD, DYNAMIC, MOVIE, GAME, USER. PC mode: STANDARD, USER.)

NOTE

- When using the remote control unit, point it at the Plasma Display.
- See the instruction manual for operating buttons not listed on this page.